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SOUTHERN
TEXTILE BULLETIN

VOL. 35 CHARLOTTE, N. C., THURSDAY, SEPTEMBER 6, 1928 NUMBER 1

Thorp Invented Ring Spinning

Draper followed with the development and introduction of the Sawyer and Rabbeth High Speed Spindles and Double Flange Rings—developments that enabled Ring Spinning to displace Mules for the larger part of American Spinning.

Draper Centrifugal Clutch Spindles and Mirror Spinning Rings are still the Standard in the industry.

DRAPER CORPORATION

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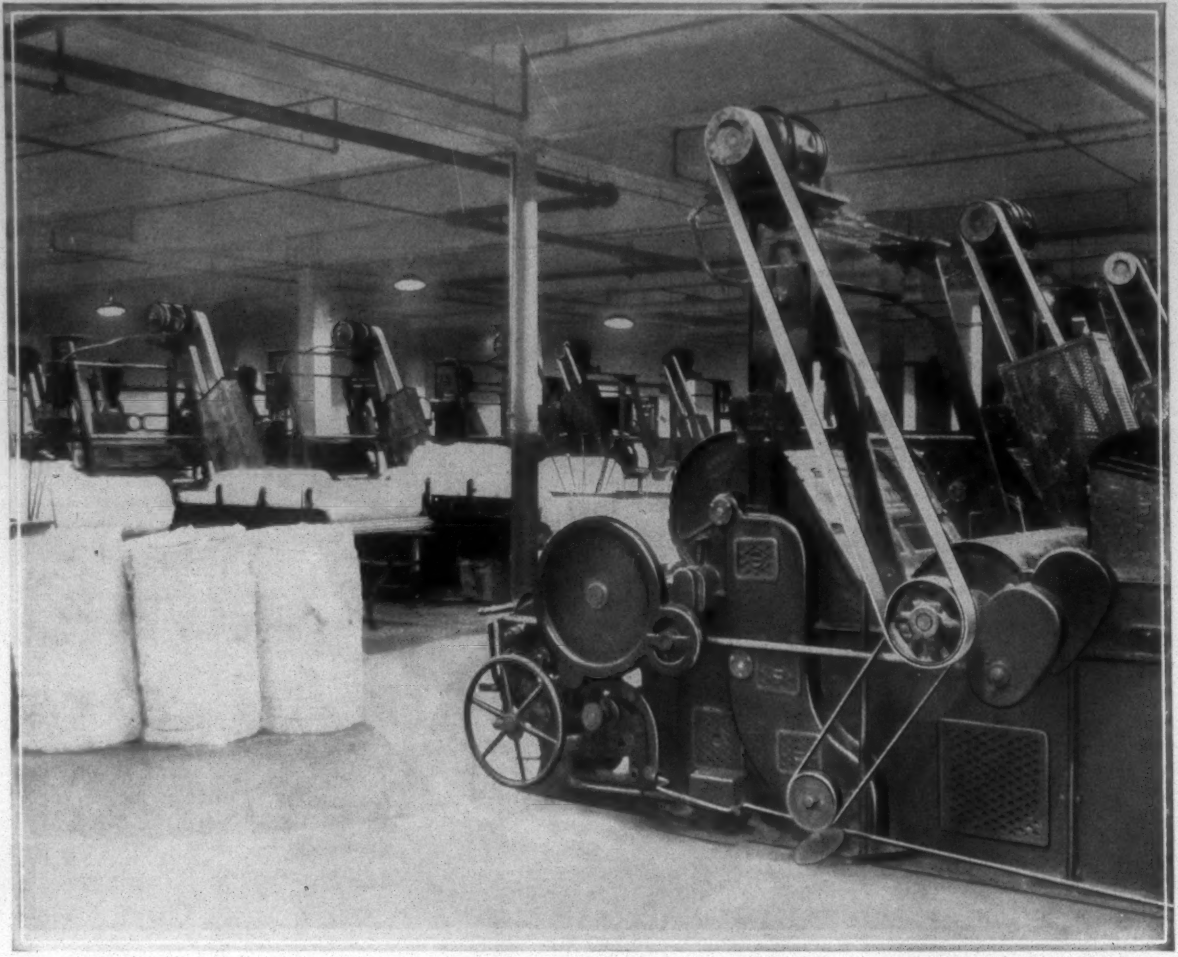
Alphabetical Index to Advertisers Page 34

Classified Index to Advertisers Page 48



On the newest type drives in the mill of Joseph Bancroft & Sons Co.

You're looking at a battery of pickers in the nationally known cotton manufacturing plant of Joseph Bancroft & Sons Co., of Reading, Pa. Pickers are pickers, and these are no different than the rest—except for the way they're driven.

Here you see one of the newer types of drive—with the power transmitted from motor to machine by **leather** belts. To make these drives as efficient and trouble-free as possible, this company has fitted them with Graton & Knight leather belts.

Not only their pickers, but practically every drive in this well known company's mill is belted by Graton & Knight. After you're read the Standardized Belting Manual that describes the Graton & Knight process of belt making, and contains real proof of the longer lasting, better running qualities of Graton & Knight belting, you'll realize why so many large companies are using Graton & Knight belting as standard equipment. Send for it.

GRATON & KNIGHT COMPANY
WORCESTER, MASSACHUSETTS
Branch offices throughout the World

GRATON & KNIGHT
LONG LIFE LEATHERS
Send For Special Information

Flat Belt. Round Belt. Fan Belt. Lace Leather "V" Belt Drives. Comber and Gill Box Aprons. Leather Cups and Crimps.

Pickers. Straps. Curried Leather. Rub Aprons. "Gold Spot" Spartan Sole Leather. Oak Sole Leather. Soles. Counters. Welting.

GRATON AND KNIGHT

GRATON & KNIGHT COMPANY, Worcester, Mass., U.S.A.
Send me a copy of the "Belting Manual"
Name
Company
Place
Prices, quality for quality, 5 to 10% lower than the field
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Graton & Knight
Standardized
LEATHER BELTING LASTS LONGER

One of a series of advertisements giving you ACTUAL PERFORMANCE FACTS on Graton & Knight Belting

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HERE is one source of loss that management can control. And through it gain control over other items as well.

For example — When labor costs mount higher, new equipment may bring lower unit cost. Lower unit cost in turn brings competitive advantages. A chance to operate at capacity. Reduced overhead. More sales. More profit.

WHITIN engineers are trained to locate losses and suggest a remedy. A remedy that sooner or later pays for itself in the savings that it makes. So investigate. Without cost or obligation a WHITIN engineer will call and help you check for preventable losses. If he cannot help you he will honestly and frankly say so.

WHITIN
MACHINE
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WHITINSVILLE
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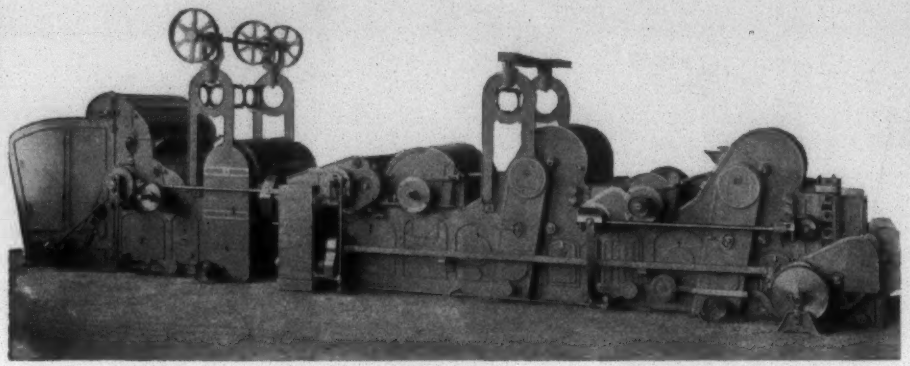
THAT USES SKF BEARINGS AS REGULAR EQUIPMENT

H. & B. AMERICAN MACHINE CO.



Picking Machinery That Runs Without Bearing Trouble—on SKF

THREE major reasons why SKF Ball Bearings run without a bit of trouble on H & B picking machinery —they:—

Stand-up under heavy loads at high speeds
Maintain close setting indefinitely
Require only infrequent lubrication

Digging deeper for the contributing causes we find that SKF Ball Bearings will run day and night with hardly any attention. Wear is a negligible factor and no bearing adjustments are ever required. This makes possible the production of an even lap of uniform weight. With lubricant kept in the bearings, off the machine, and dust and sand effectively excluded, fire hazard is reduced and bearings always run cool.

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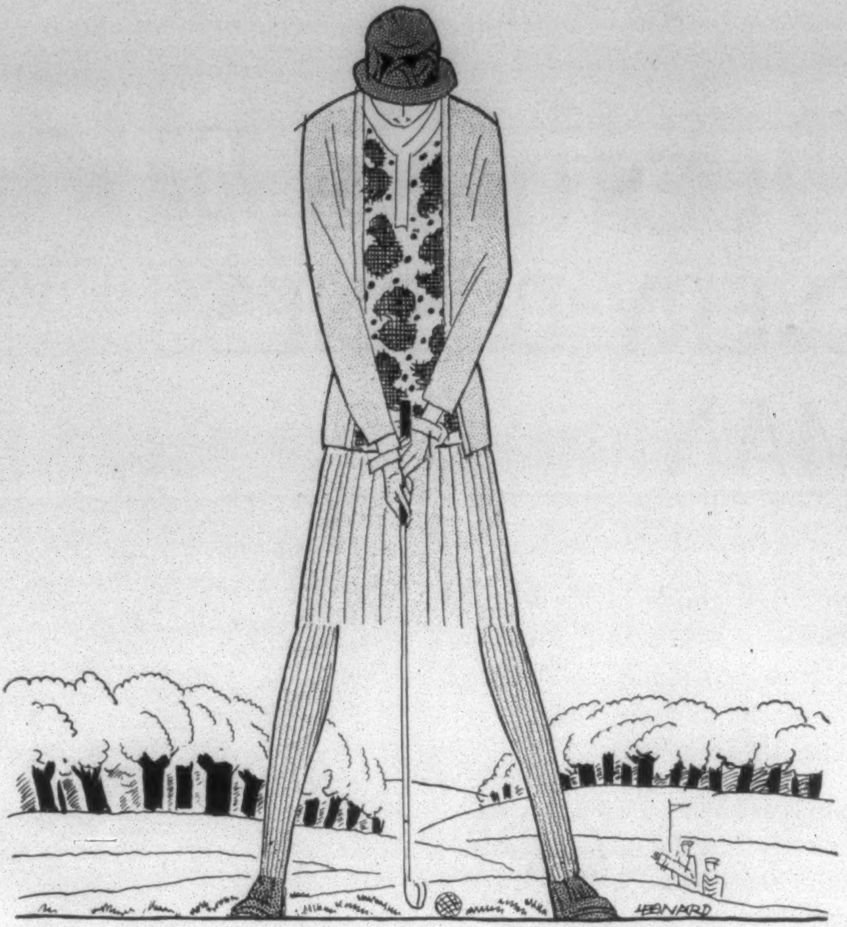
SKF

THE HIGHEST PRICED BEARINGS
IN THE WORLD

Nothing is apt to cost so much as a bearing that cost so little

You men who plan, build, use or pay for machines of any kind, remember this: It costs more to replace a poor bearing than to buy the best one that SKF ever produced. AND SKF ANTI-FRICTION BEARINGS ARE THE HIGHEST PRICED IN THE WORLD.

SKF Puts the Right Bearing in the Right Place



CELANESE

INSPIRES BRILLIANT SPORT MODES

In the sport modes of today, fabrics made from Celanese brand yarns are playing a momentous part. Uniting beauty, distinctiveness, and practicality to a hitherto undreamed-of degree, Celanese fabrics are the natural expression of the sport ideal. ❧ They afford, too, the great advantage of almost limitless variety. Moirés, crêpes, jerseys, satins, taffetas, damasks, twills... low luster and high... brilliant hues and neutral shades... all these, and more, await your selection. ❧ And all of these Celanese fabrics are completely washable. The colors are fast, the weaves are strong, and a little soap and water... even cold water!... removes all impurities easily. ❧ Warm in winter, cool in summer, cosy at all times, sportwear fashioned from Celanese is being featured, with outstanding success, by prominent stores and specialty shops throughout America. *Have you received your copy of the beautifully illustrated new brochure "The Miracle of Celanese"? If not, we will gladly mail you one on request.*

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(Reg. U. S. Pat. Off.)

Celanese Corporation of America, 15 East 26th Street, New York

166 West Jackson Blvd., Chicago :: 1046 Public Ledger Bldg., Philadelphia :: 38 Chauncy Street, Boston :: 1116 Johnston Bldg., Charlotte, N. C.
Works at AMCELLE (near Cumberland), Maryland :: Canadian Address: Canadian Celanese, Ltd., Montreal

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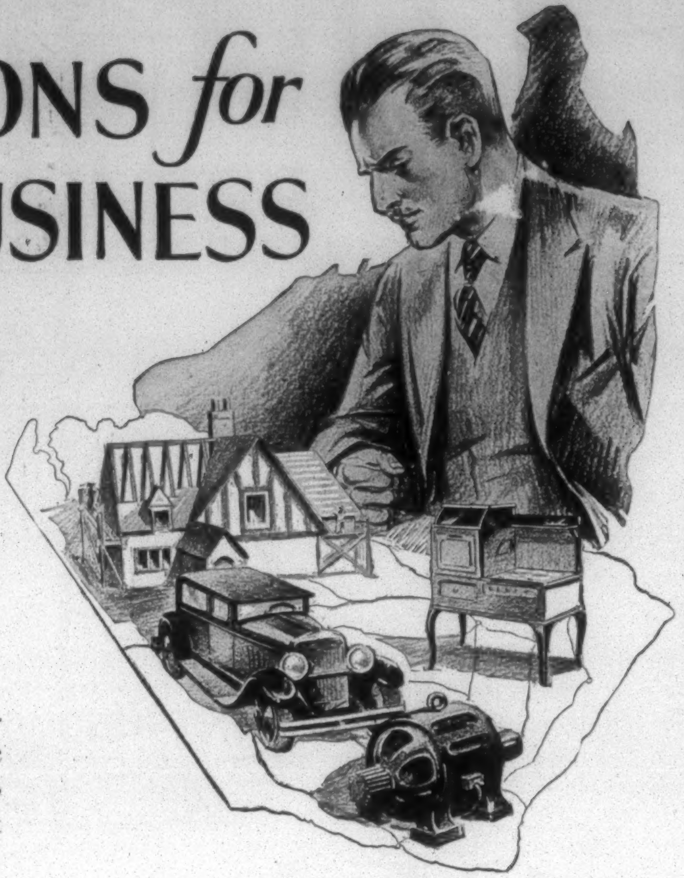
4 QUESTIONS *for* EVERY BUSINESS MAN



WHETHER you sell goods in Piedmont Carolinas, or sell *against the competition* of Piedmont-made goods in the markets of the nation, there is meat for you in these facts:

For the fourth year hand running this section has set a record in the sale of electric ranges. (Were they *your* make?) Do people who are not prospering buy that type of merchandise?

Automobile registration has increased 214% faster than the National average. (Were your cars among them?) Do people buy automobiles except when times are good with them?

Building activity here, in dollars per capita, is 66% higher than for the country at large. (Are your materials going into those Piedmont homes and factories?) Is there any better index of a region's prosperity?

Consumption of electrical current here has grown 100% faster than the nation's average. (Are your appliances helping to build that load?) What better indicator is there of the region's industrial busyness!

No matter what you make or what you sell, Piedmont Carolinas offers advantages in manufacture and opportunities for selling that are difficult to match. In many lines—as shown above—the opportunities are *not* matched.

You need the facts—all the facts—about this too little known land of opportunity.

SEND for the book shown here. It will help you to understand the causes behind the prosperity and buying power of Piedmont Carolinas and to appreciate the unusual advantages offered here to industry. Address Industrial Dept., Room 718, Mercantile Building, Charlotte, N. C.

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DUKE POWER COMPANY

SOUTHERN PUBLIC UTILITIES COMPANY AND OTHER ALLIED INTERESTS

SOUTHERN
TEXTILE BULLETIN

PUBLISHED EVERY THURSDAY BY CLARK PUBLISHING COMPANY, 18 WEST FOURTH STREET, CHARLOTTE, N. C. SUBSCRIPTION $2.00 PER YEAR IN ADVANCE. ENTERED AS SECOND CLASS MAIL MATTER MARCH 2, 1911, AT POSTOFFICE, CHARLOTTE, N. C., UNDER ACT OF CONGRESS, MARCH 3, 1897

VOL. 35 CHARLOTTE, N. C., THURSDAY, SEPTEMBER 6, 1928 NUMBER 1

Principles of Predetermining Cotton Manufacturing Costs

SOUND principles for predetermining costs for cotton textile manufacturers are presented in an outline just completed by the Cotton-Textile Institute, Inc.

This outline is recommended to the industry by President Hines and Cost Engineer Duncan of the Institute, after extensive conference with the various groups of mills, and it has the approval of Joel M. Barnes and Ralph E. Loper, textile cost engineers, and Price-Waterhouse & Co. President Hines wishes the mills, in the light of this outline, to re-examine their present cost accounting methods.

In a letter of transmittal accompanying the report, President Hines says:

"One of the most constructive steps that can be taken for the industry will be to get the individual mills and their selling agencies to keep costs, accurately figured, always in the foreground, rather than in the background or entirely out of sight and out of mind, when sales policies are being considered.

"Figures developed by sound cost calculations are the only way in which a mill and its selling agents can know the comparative costs of the different yarns or fabrics it proposes to make, and the relative degrees of profit or loss attaching to these different products. Without this knowledge a mill may continue to make less profitable products and its selling agency may continue contented to sell them at prices disproportionate to their costs. The only argument to justify a policy toward cost methods which keeps the mill and its selling agency in ignorance of the true cost of every particular product is the old idea that 'ignorance is bliss;' but a successful mill business cannot be based, in the long run, upon any such principle.

"A further advantage of sound and accurate cost figures is that they afford an invaluable guide to the efficiency of the mill organization and aid in bringing to light inefficient or less efficient methods which otherwise might be lost sight of. The opportunities in this directiho will be greatly increased by the development of uniformity in cost bases and methods. Indeed this will afford an opportunity, if any group of mills so desires, for arriving at the average cost accounting results for that class so that each mill may gauge its own efficiency by comparison of its own results with the average results for the group as a whole. But even though mills may not desire to join in making such comparisons, each mill which is now without an adequate cost finding system will find its own adoption of such a system an important additional check respecting its efficiency."

The outline places special stress upon correct ascertainment of normal production and exercises this as follows:

"When a mill comes to decide upon a proper figure for normal production, it has to combat what seems to be quite a natural disposition to assume a volume of production in excess of the normal volume actually produced theretofore, and in excess of the volume which, in the light of experience, the mill can reasonably count upon producing on the average in the future. The mill needs to be on its guard against this tendency, which, if followed, will result in an underestimate of costs.

"If the experience of a mill and also its reasonable business-like prospects for the future indicate that its actual production is and will be at the rate of 75 per cent of its total maximum theoretical production, it is this 75 per cent which should determine the figure to be employed as its normal production a figure less than its maximum theoretical production but nevertheless substantially in excess of its actual production, past and prospective, it will commit the same error but in a less degree. For example; if a mill assumes that its production is 90 per cent of its total theoretical maximum capacity but in fact its production is only 75 per cent thereof, the result is that it underestimates its costs as to many important items to the extent of 16 2-3 per cent.

"Experience must convince the mill that it does not in fact produce for the full fifty-two weeks in the year and at 100 per cent of its theoretical maximum capacity for every one of those weeks. Many causes contribute to actual production being considerably less. Among these causes are the inevitable stoppages of spindles and looms, and other stoppages due to mechanical conditions or labor interruptions, all of which through only partial and temporary, operate to cut down the actual production per year. Above all such conditions the mill must also allow for the fact that production will likely have to be further diminished in order to avoid over production and surplus stocks of merchandise which would demoralize the market. The need of adjusting production to keep it in balance with demand is receiving increasing consideration, for it has become increasingly apparent that if the cotton textile industry runs continuously at anywhere near its full capacity it will so far exceed the demand for cotton goods as to create a condition of the utmost demoralization. It is important to weigh all these elements in a practical, business-like manner and in that way arrive at a sound estimate of normal production. Without this the cost per pound or per yard will be inaccurate and the strong probability is that it will be underestimated."

Taking up the subject of cost of cotton, the outline says:

"Replacement cost, instead of book value, of cotton and waste should be used in the predetermination of costs for use in determining sales policies. In view of the fluctuating prices for such raw materials, a sound policy on this point is of the greatest importance. A mill is justified in assuming that the raw materials it uses have the market value current at the time of sale of its product and indeed the mill cannot proceed with confidence and accuracy upon any other principle. If at the time a mill decides to sell its product, raw cotton has a market value of 15 cents, that should be regarded as the cost that the mill will put into the product, and this should be true whether at some preceding time the mill had bought that cotton for either 20 or 10 cents. The profit or loss the mill may have sustained on raw cotton between the time of its purchase and the time of sale of its product cannot correctly be regarded as affecting the true value of the raw materials as of the date of sale. Not only is this sound from the standpoint of the facts, but it is highly important from the standpoint of merchandising policy because any other method involves the mill in misleading itself as to the significance of the cost of the raw materials with reference to the price of the product.

"If at the time of sale of its product the raw material has declined in price since its purchase, the mill cannot on that account get a price for its product which will reflect the higher price it paid at an earlier date for its raw material. The mill must yield to the prevailing price levels of the market and these almost invariably reflect any declines that may have taken place in the price of cotton. If at the time of sale of its product the raw material has increased in price, the raw material is worth as material that present value and if the price of the product reflects, as it should, the current value of the raw material the mill should not omit to profit by that condition. It may be true that very frequently the price of cotton products fails to reflect the increase in the price of cotton, but the mill should not accentuate that unfortunate tendency by deliberately disregarding the fact that, at the time of sale of its product, the product should be charged with the then value of the raw material.

"If a mill disregards the replacement cost of cotton at the time it sells its goods and seeks to predetermine its costs on the basis of what it theretofore paid for cotton, it not only disregards the fact as to what it could get for the raw cotton if it sold it instead of making it into goods, but it also commits itself to a rule of cost predetermination which will tend to affect it injuriously whichever way cotton prices move; if the price of cotton declines, market conditions will compel reduction in the price of the goods despite the fact that the mill may compute its predetermined costs on the book value of cotton; but if the cost of cotton increases, the mill's policy of predetermining costs will not only have no tendency to promote the mill's position as to the price of its goods, but will have the directly opposite tendency through understating the true cost of the cotton going into goods, as that cost stands on the date of such sale, and will encourage the mill and encourage the trade to act upon an underestimate as to such cost."

Of the item of depreciation, which includes both depreciation and obsolescence, the outline states:

"When productive equipment is worn out or becomes obsolete, it must be replaced, and the only safe method for assuring that provision has been made for its replacement is by including in the cost of the

(Continued on Page 36)

New Plant of American Glanzstoff Corporation

THE production of the first skein of yarn at the new plant of the American Glanzstoff Corporation, Elizabethton, Tenn., on August 1, 1928, marks the beginning of operations in this large new unit, and the first production was reached about one month ahead of the date predicted in February, at which time the American Glanzstoff Corporation predicted the beginning of operations about September 1, 1928.

Rapid Completion Accomplished.

The first steam shovel started work on August 18, 1927, so that a little less than eleven and one-half months were required from the turning of the first shovelful of dirt to the production of finished yarn. Since about 70,000 yards of earth had to be moved in grading and levelling the site, this occupied over two months, and the first concrete foundation work was not poured until November 4, 1927, so that the total time from the pouring of the first concrete to the production of the first yarn was slightly more than nine months.

In view of the size of this plant, it is believed that this presents a record of rapid accomplishment in the construction and equipment of such a plant and much credit is due to the various contractors who helped make this possible.

Progress on Steel Work.

Extremely rapid progress on the fabrication and erection of steel work was carried out by McClintic-Marshall Company, the entire main plant, with approximately 3,500 tons of steel being detailed, fabricated, shipped, erected, and painted by them in 81 days, elapsed time, from the date of their contract, and during one week more than 100 cars of structural steel were delivered by them on the work.

Yarns Ready for Market.

It is expected to have graded yarns ready for the market immediately, and in steadily increasing quantities. All yarns produced in this plant will be of the new type with 32 filaments for 150 denier yarns, and of the soft silklike quality, without too much lustre, which is now in demand.

The American Glanzstoff Corporation have been importing yarn at the rate of several million pounds per year, principally in the fine numbers, and of multiple filaments. On account of the fact that there is a considerable demand for imported yarn because of the return duty for rayon products exported, it is planned to continue the importation of yarn at approximately the present rate, and in addition to sell the output of the new plant in this country.

Increased Sales Organization.

For this purpose, the sales organization has been built up to take care of the increased production by opening new sales offices in the various textile centers. The American Glanzstoff Corporation have provided experts in weaving and knitting for the assistance of their customers in solving problems and in finding new uses for the yarn.

The American Glanzstoff Corporation is also a member of the Rayon Institute composed of the Viscose Company, Dupont Company, Industrial Rayon Company, the Bellamose Company, and the American Glanzstoff Corporation.

Officials.

The officials of the American Glanzstoff Corporation are Dr. Arthur Mothwurf, president; B. C. Dunlop, vice-president and in charge of the New York office; A. L. Erlanger, assistant secretary and sales manager.

Full Production Early in 1929.

It is expected that full production of the new plant will be reached early in the year 1929.

Capacity.

The capacity of this new plant when in full production will be from 4,500,000 to 5,000,000 pounds per year of 150 denier yarn.

Provision for Additional Unit.

The new plant has been constructed as one unit of one-half the ultimate size contemplated, and layouts have been made to provide in every way for the construction of the second unit, without any changes whatever in the first unit. All of the buildings have been provided with temporary wood ends on one side, where the second unit will be constructed.

The layouts for the new plant were prepared in Germany by the engineering department of the American Glanzstoff Corporation, based on their experience in the layout and construction of a number of European plants, so that this new plant represents one of the most modern plants ever constructed for the manufacture of rayon by the Viscose process.

Provision made for convenience of operation, economy of handling materials and for the control of quality of product, as well as for the comfort and convenience of the employees, are the best which could be worked out.

All construction is designed in a thoroughly permanent way so that the minimum expense will be involved for maintenance and repairs.

Quality of Product of First Importance.

The new plant includes exceptionally ample laboratories—both textile and chemical, for the thorough control of quality of product, and no expense has been spared at any point which could possibly affect the quality of the yarn, thus indicating the determination of the American Glanzstoff Corporation to maintain the high standard of quality already set by their imported yarns.

Floor Space.

Total floor space of the plant is, in round figures, about 600,000 square feet.

Site.

The site for the new plant is located immediately adjoining that of the American Bemberg Corporation at Elizabethton, Tenn., with a distance of about 1,600 feet between the two plants. This site was selected only after a thorough study had been made by the engineers of the American Glanzstoff Corporation assisted by Lockwood-Greene engineeds, Inc., of a number of possible sites in various States, which was carried out during the spring and summer of 1927.

As a result of negotiations with the communities of Johnson City and Elizabethton, the county agreed to build an entirely new concrete road from Johnson City to the plant of the American Glanzstoff Corporation in addition to the existing concrete road but over a more direct route, and this road is now in process of construction.

Housing.

It was also agreed by the communities to provide immediately 2,000 houses for the exclusive use of Glanzstoff employees, and many of these houses have already been completed, and the balance is under construction. Plans are also under way for the construction of additional houses for employees in the vicinity of the plant.

Club House.

There is also under construction at this time an attractive and comfortable club house for the use of officials and employees of the American Glanzstoff and American Bemberg plants, which is being built adjoining the new concrete highway now under construction.

Water Supply.

Water for all uses, including power plant, fire protection, domestic water supply and for process requirements is obtained from the Watauga river adjoining the site and is furnished by a combined filter plant owned and operated jointly by the American Bemberg Corporation and the American Glanzstoff Corporation. This filter plant has a total filtering and pumping capacity of 13,000,000 gallons in 24 hours.

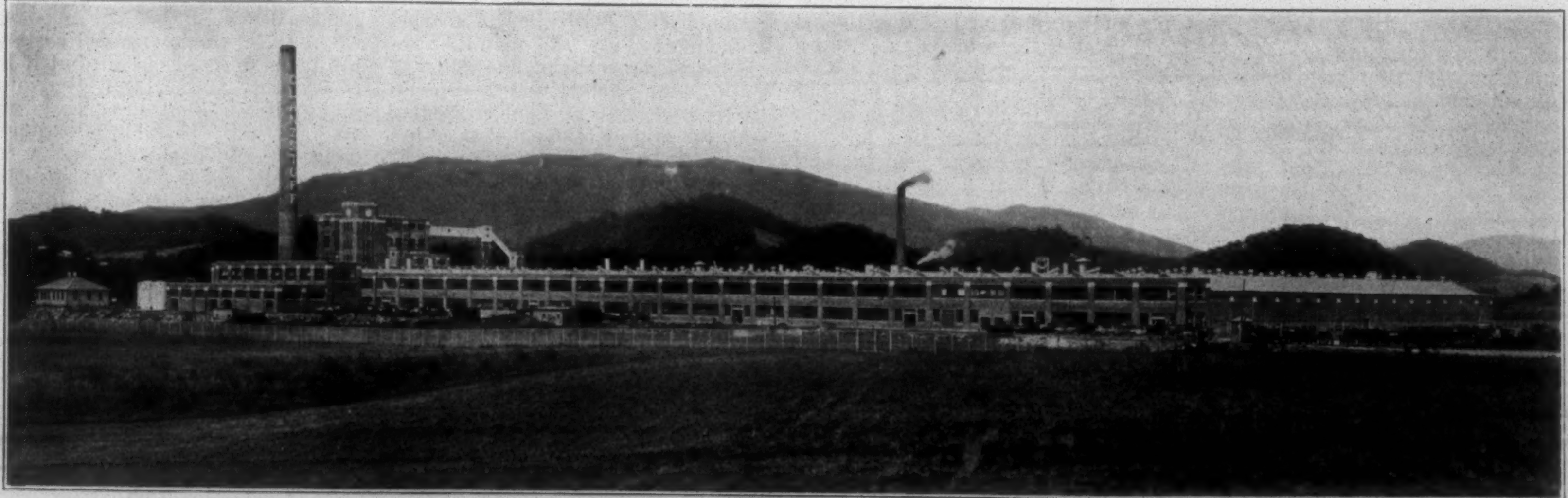
Power Plant.

The American Glanzstoff Corporation has constructed its own power plant for the purpose of supplying all power, heat and light as well as warm water and steam required for the process. In addition to this, connections are made with the power plant of the American Bemberg Corporation nearby, so that an exchange of power may be carried out between the power plants of the two companies, thus providing additional reserve supplies of power.

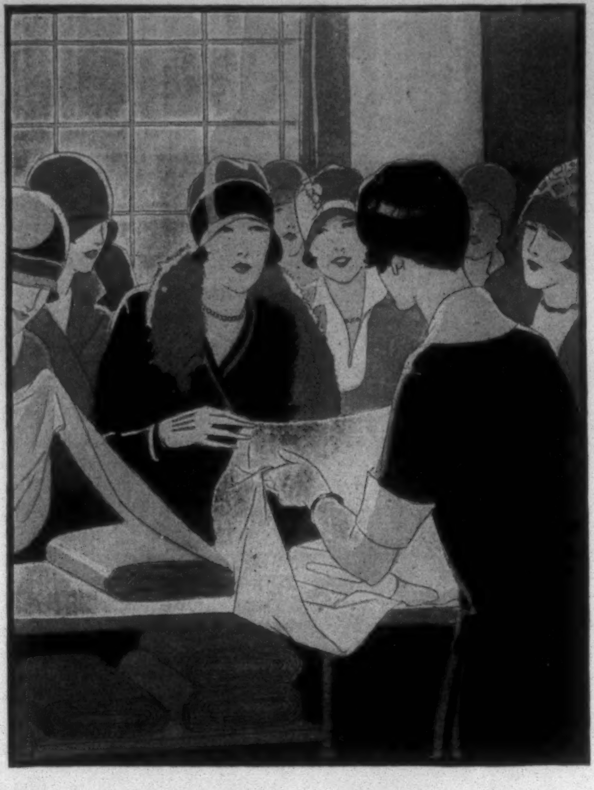
Organization for New Plant Construction.

The design, construction and equipment of the plant has been carried out under the direction of Oskar Oppenlander, of the American Glanzstoff Corporation, assisted by J. Brekke.

(Continued on Page 38)



Completed Plant of American Glanzstoff Corporation, Elizabethton, Tennessee.



TO MARKET-TO MARKET

to buy a pig in a poke

Another American Tragedy, in two acts and a big reaction:

ACT I

(The dress goods counter in a department store, a half hour before closing time: frantic shoppers, tired sales girl)

Shopper: Girl, girl—please wait on *me*. I've hunted all over the city for these colors and, thank goodness, I've found them.

Sales Girl: Yes ma'am. How many yards? Charge? Send it or take it with you? What's that?

Shopper: I said, are these colors fast enough for beach wear?

Girl: Colors absolutely guaranteed, yes ma'am.

ACT II

(Shopper and friends at cards)

Shopper: ....'s Department Store? Don't go there. You never know what you're getting. Remember that dress I had made for the beach? I wore it less than a week and the color faded right out .... Take it back? Oh, I couldn't be bothered. Anyhow, they shouldn't guarantee anything that isn't right.

Reaction. (Buyer's office Salesmen and buyer hard at it.)

Buyer: You've got a nice line but somehow business isn't so brisk.

DU PONT DYESTUFFS

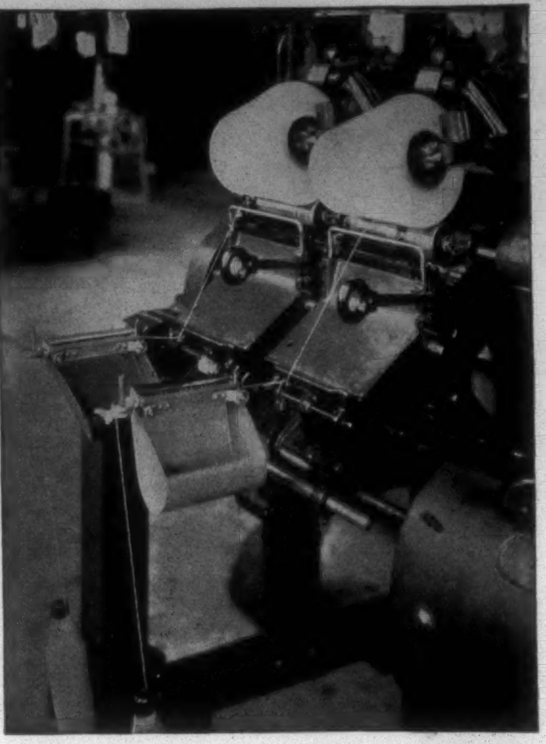
REG. U. S. PAT. OFF.

False values make false profits. Textile manufacturers and merchants alike are beginning to realize that...

Everybody gets more for their money in

FAST-DYED FABRICS

E. I. DU PONT DE NEMOURS & CO., Inc. *Dyestuffs Department* WILMINGTON, DELAWARE



It's a simple matter to collect the dirt

THERE it is, all the dirt the vibrating blades have removed . . . slubs, bunches, knots . . . cornered in the individual waste can that's slung under each Eclipse Yarn Cleaner. It's a simple matter to collect the dirt from a line of these waste receptacles. You can do it in less time than it takes to clean out a box or trough serving a group of working cleaners.

And when you let this new Eclipse be the "policeman of the Winder," you can bank on it nabbing every piece of foreign matter that comes jaunting along with your yarn. Incidentally, it's built stronger, simpler . . . and you'll find it considerably lower in price. Let us send you an Eclipse on trial . . . or give you a demonstration. Write us.

Eclipse Textile Devices, Inc.
Makers of the Eclipse-Van Ness Random Dyer
Elmira, N. Y.

Urges Cotton Manufacturers and Growers to Co-operate *

By James McDowell.

A GREAT advance has been made during past years in the development and operation of cotton breeding to a comparatively straightforward process in so far as the isolation and purification of strains from impure commercial varieties is concerned. So long as the breeder is dealing with characteristics which influence the agriculture and yield of the crop, he is able to work on well-marked lines to definite objectives.

Deplores Lack of Relation to Spinning.

But since cotton is grown solely in order to be spun, it is most deploraple that the foresight, time, concentration and labor expended on the breeding of any single cotton should be devoid of any purpose or meaning so far as the yarn and cloth manufacturer who uses the cotton is concerned.

It is the fault of the cotton manufacturer that this absurd situation exists. The scientifically exact knowledge of spinning is far less advanced in most cotton mills than that of agriculture in general, and of cotton growing especially.

All that most cotton spinners can prescribe to the cotton breeder who is going to experiment with a new seed is a vague recommendation to provide "fineness" (which is undefined); "length" (which is uncertain), and "strength" (which has three different meanings).

No Guide for Directing Efforts.

Seeing that a cotton breeder must necessarily start work at least three to five years before he can produce even a small sample of cotton for testing purposes, the prospect of utilizing the scientific knowledge of the cotton breeder deliberately to assist the cotton spinner is, on these lines, very remote.

For the present, therefore, we allow the cotton breeder to produce whatever he can, confining his direct purpose to agricultural merits. Then, when enough lints have been grown, we make a test of it through some kind of spinning machinery judged to be suitable, and measure the strength of the yarn it makes and sometimes the amount of waste the machines make. In most of these tests the results are all right; cotton is grown to be spun, and if it will not make good yarn it is not good cotton. But neither grower nor spinner is much the wiser after such a test. The data on both sides are not analyzed and without such analysis there can be no generalization, so that a new spinning test has to be made for every new lot of cotton grown.

Probably Could Drop Spinning Tests

If it were possible to supplement the data concerning pedigree and environment which the grower possesses and the further data about spinning and yarn which the spinner can provide, by detailed physical, chemical, and biological study of the single fibers themselves, it might be possible before long to dispense with spinning tests except for final corroboration. All the spinning properties of a cotton sample are the expression of measurable properties of the cotton fiber therein, mainly physical, and probably capable of being condensed to about 12 constants. Once these are determined and correlated on the one hand with spinning, and on the other with plant growth, the values involved in spinning quality will be analyzed out, and the breeder will be able to work to a definite objective in respect to quality as well as to yield per acre. He will endeavor to procure cotton having such values for the measurable properties of the fibers as the spinner—knowing then what he wants—will have demanded.

Cotton fiber has a distinct physical quality which makes it possible to spin it into strong and even yarns. From the root of the seed hair to the sealed tip runs a tube filled with oil during the ripening process of the fiber, and when thorough maturity is reached the oil retreats to the seed and the fiber collapses. This causes the falls to take on a curious half formed spiral twist, some to the right and some to the left. This is one of the reasons that cotton can be spun either right or left hand twist. Under magnification these twists look just like ribbon twisted. These spirals, caused by the collapsing cell walls of the fiber, are the adhesive element that makes it possible to spin them. In the final analysis, therefore, it is the number of spiral turns of the fiber to the inch that determines the evenness and strength of the yarn. This is one of the reasons that the longer staple cottons, other things being equal, are always used to spin the finest counts of yarns.

Diameter of Fiber Vital Consideration.

There is, however, another consideration often overlooked by manufacturer and grower, and that is the diameter of the fiber. It is obvious that the greater number of fibers included in the cross section of a yarn, the greater will be the strength of the yarn because the strength of yarn is determined by the degree of friction created by the natural twist of the fibers when the latter are in contact. Mere length of fiber, however, desirable, when other qualities are equal, is not the sole spinning determinant. It is the relationship between the number of twists, the length of the fiber, and the number of fibers in the cross section of any given yarn that is important. Hence, the finer diameter of the cotton fiber the more suitible it is for spinning even strong yarns. The number of fibers in a cross section of yarn can be counted

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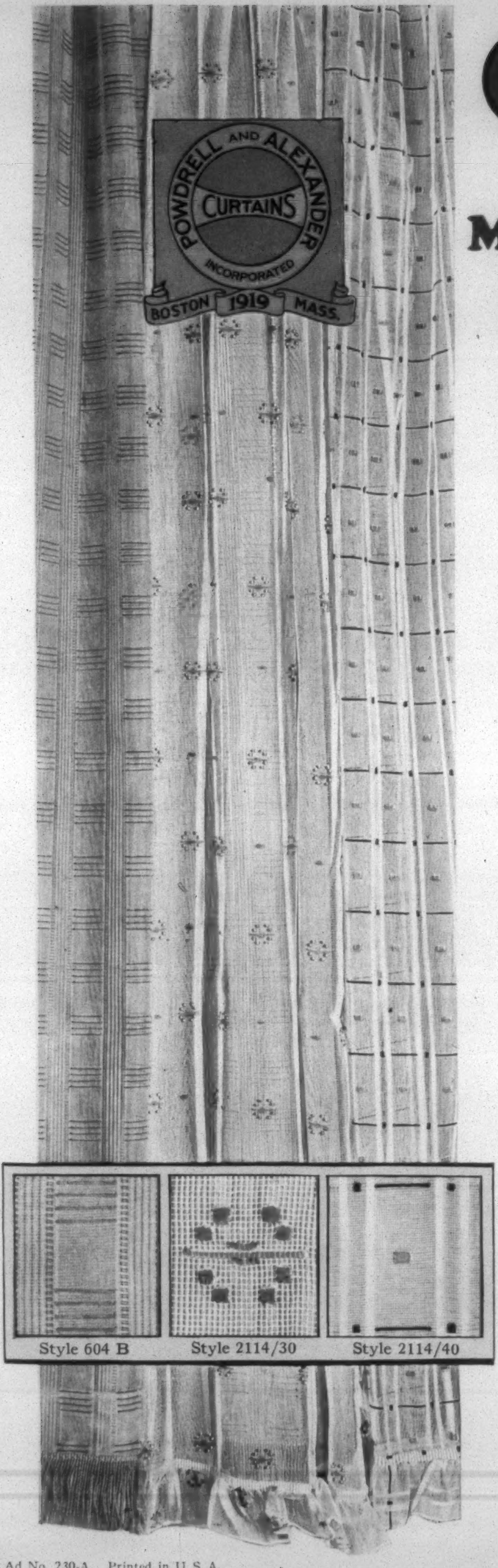
*Address delivered at County Fairs in McKinney and Plazo, Tex.



Color, *the* MASTER SALESMAN

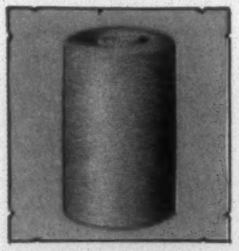
PACO CURTAINS, manufactured by Powdrell & Alexander, Inc., of Boston, Mass., are acknowledged to be one of the fastest selling lines in the country. What makes them sell? Color! Rich, vivid, and daring hues and subdued, dainty shadings, in clipped and dotted effects, on neutral grounds, give Paco Curtains the eye-impelling attractiveness that spells sales.

This attractiveness is lasting, too, for all colored yarns used in these curtains are dyed with Fast-to-Bleaching shades (vat colors) by the Franklin Process. These colors are the fastest known, to washing, light, and all color-destroying agents.

The outstanding success of Paco Curtains is typical of the experience of many manufacturers using Franklin Process Colored Yarns.

We have prepared a portfolio showing full-color reproductions of some of these fabrics, which every creator and manufacturer of yarn-dyed fabrics will find interesting. Shall we send you a copy? Just say you want it.

FRANKLIN PROCESS COMPANY
Largest Job Dyers of Yarn in America
also Yarn Spinners, Manufacturers Glazed Yarns, Dyeing Machines



A FRANKLIN PACKAGE OF DYED YARN

It will deliver freely, either by rotation or over end, substantially lowering winding costs.

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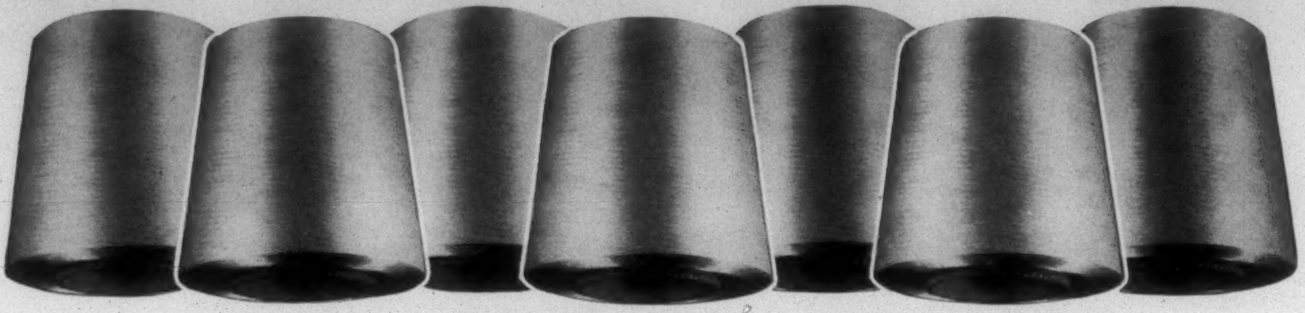
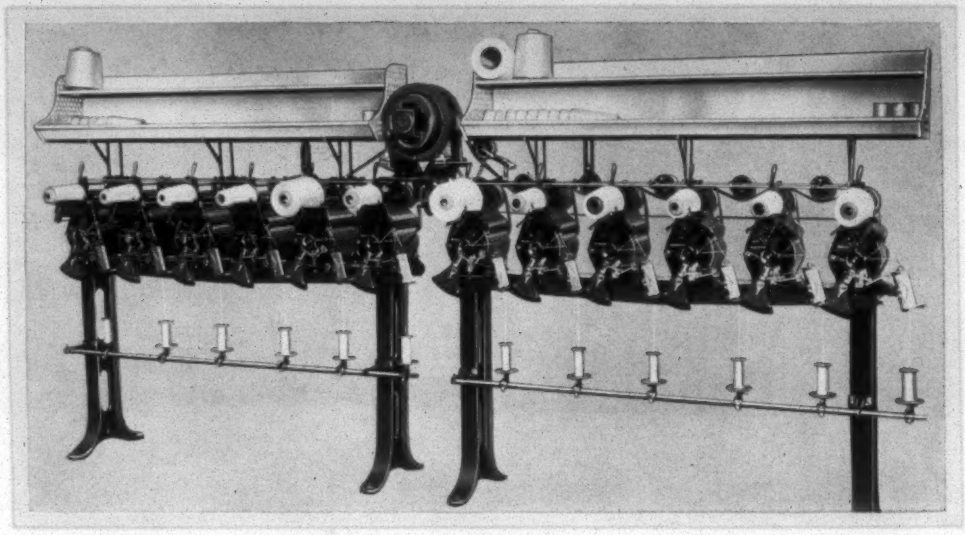
PHILADELPHIA PROVIDENCE DENTON, ENG.
New York Office, 66 Leonard St. Chicago Office, 222 W. Adams St.
SOUTHERN FRANKLIN PROCESS CO., Greenville, S. C.
CENTRAL FRANKLIN PROCESS CO., Chattanooga, Tenn.
FRANKLIN RAYON DYEING CO., Providence, R. I.

FRANKLIN PROCESS
Commission Dyeing of Yarn in the Wound Form

Ad No. 230-A. Printed in U. S. A.

JUMBO CONES





WINDING FIBRE SILK FOR KNITTING

No good manufacturer of knit goods would even contemplate knitting from a small supply like a cop or bobbin, for two fundamental reasons: first, the supply would be too small, and second (and more important), in drawing off from knitting supplies of small diameters, the material must unwind rapidly, due to the fact that one wrap represents but a very short length of yarn.

The ideal knitting package of fibre silk is a cone of $5\frac{3}{4}''$ traverse, built on a large diameter cone tube, as represented by the "Universal Jumbo" cone wound on the "Universal" No. 50 machine.

The empty cone tube has an average diameter of $2\frac{7}{8}''$, and the outside diameter of a three-pound cone when wound is $5\frac{5}{8}''$. The three-pound cone represents the maximum recommended for fibre silk, and naturally cones of smaller diameter and less weight may be wound, if desirable.

Starting with this large-diameter cone, the wall of fibre silk on a package containing three pounds net is but $1\frac{3}{8}''$. Glancing at the illustrations above of "Jumbo" cones, you will readily appreciate the assurance of even tension when knitting from a package with large circumference, and with none of the impediments to delivery common to bobbin types of winding.

The "Jumbo" cone, the latest product of the "Universal" No. 50 winder, is the result of exhaustive study and careful development by the Universal Winding Company, collaborating with the manufacturers of fibre silk, and with the knitters of this material.

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UNIVERSAL WINDERS

Ad No. 22. Printed in U. S. A.

The Eighth

Southern Textile Exposition

will be held in

Textile Hall, Greenville, S. C.

October 15th to 20th, inclusive

The management and the exhibitors cordially invite all those engaged in cotton textile manufacturing, and those in other lines of industry, to visit this remarkable exhibition of machinery, accessory equipment and supplies.

The numerous displays will suggest many new ideas in the technique of manufacturing, through which executives will be able to effect large economies in operation and gain greater production.

The exhibitors are spending large sums in preparing their exhibits. In every way this exposition will prove the most interesting and comprehensive ever held here or elsewhere.

The Exposition will be open from Monday, October 15th, to Saturday, October 20th. Arrangements for rooms will be made upon request to Reservation Committee, Box 307. Executives may address directly, if preferred, Textile Hall Corporation, Greenville, S. C.

Reduced fares on all railroads south of the Potomac and east of the Mississippi Rivers

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The October 11th Issue

of the

SOUTHERN TEXTILE BULLETIN

will be almost exclusively devoted to the

Southern Textile Exposition

Brimful of intensely interesting news and sidelights relating to the Exposition, this number will reach subscribers just in advance of the opening and will also be distributed from our booth during the week. The *Southern Textile Bulletin* is the *ONLY* textile journal with circulation confined exclusively to the South, and is therefore the logical medium for exhibitors to use in connection with this great Southern event. Concerns not exhibiting will likewise derive unusual benefit from representation in this issue because of its timely and unusual news features and increased distribution. Regular rates will apply.

Forms Close Early—Reserve Your Space Now!

Veeder-ROOT

Spotlights the Running-Time and the *Wasted* Time

A Veeder-Root Pick Counter will focus attention on the actual running time of a loom, as shown by its record of picks. It will total the picks woven daily or hourly, to compare with the number you *ought* to get with the loom making a good average running time.

Spotlight the record of every weaver, and watch production go Up!

Veeder-Root Textile Counters can be applied to every machine and work-situation in a mill. Write for Booklet T-1, or ask to *try* one of the Counters.

Veeder-ROOT INCORPORATED
HARTFORD, CONN.

Southern Representatives:
Carolina Specialty Co.,
Charlotte, N. C.
E. E. Lovern,
Newman, Ga.

Vaughan's
Carding Lessons

Contains information and tables of useful and practical value to the overseer or the man aspiring to that position. Amply illustrated.

Price $1.00

CLARK PUBLISHING COMPANY
Charlotte, N. C.

High Draft Spinning[*]

HIGH drafting is now regarded by many as a subject of very great importance to the cotton industry. Although, in the course of this lecture, its use on ring spinning frames only is to be discussed—as these are the machines on which it has been most generally adopted up to the present time—there appears to be no logical argument, however, against its use, under proper conditions, on drawing frames, fly frames or mules, or on any other machines where drafting or attenuation of cotton fibres is attempted.

High drafting has become an interesting study to all who have seriously applied themselves to its improvement and development and if this interest is to be imparted to others by means of this lecture, it will be necessary, in the first place, to make quite clear the aims and objects of the process which are primarily two-fold.

The Aims of High Drafting.

The first aim is to reduce the cost of manufacture of yarn. This reduction in cost is achieved by one of two methods. One of these two methods is to eliminate, wherever practicable, one process or more, from the ordinary sequence of operations on the fly frames, for example, by spinning from the intermediate bobbin and thus dispensing with the passage through the roving frame. If, for special reason, this method is not considered advisable, the usual number of processes on the fly frames is retained, but by making a coarser hank roving at each stage, the production from the fly frames can be increased and a corresponding reduction in the total number of fly frames can be effected. Both methods prtduce a coarser hank roving for the creel of the spinning frame and this necessitates the high drafting system being employed at the spinning process.

The second aim of high drafting is to secure a spun yarn possessing superior properties, by a more effective and reliable control of the cotton fibres during the high drafting process.

In view of the very difficult conditions through which the cotton industry has passed during the last few years, and under which it is struggling at present, any development which holds out the prospect of some improvement in the quality of the product, and also some economy in the cost of manufacture, should, of necessity, appeal strongly to all who are interested in the industry, whether theoretically, practically or financially. The author, however, does not wish to be misunderstood, and is not suggesting that a general adoption of high drafting in the spinning industry would prove to be the panacea for all its ills, but it is safe to affirm that the matter is of great importance and tht spinning section of the textile industry cannot afford to ignore it.

It is also quite safe to say that no change in the general practice of cotton spinning has created so much interest as high drafting since the advent of the Nasmith Comber, about 30 years ago. The reasons for this interest are not difficult to find, because it is quite correct to state, under the system, economy in the cost of manufacture has been attained and improvement in the product has not only been rendered possible but, in many instances, has already been realized.

High drafting was talked of and even practiced more than 15 years ago, and since that time there has been a gradually increasing interest in its progress which was undoubtedly retarded by the Great War of 1914-18. During the last four or five years in particular, machinists and many spinners in various countries have applied themselves seriously to its development and use. As a result, it is encouraging to record the fact that a great amount of success has been achieved.

Principles and Advantages.

The principle of drafting is just as old as cotton spinning itself, for without drafting there can be no spinning. It originated when man realized that the human finger and thumb could act as the restraining and controlling medium and made "hand spinning" possible. Since those early days drafting has been the only known means of attenuating cotton fibres, to prepare them for the process of being spun into a thread. This attenuation or drafting has rendered necessary a certain number of processes, in a sequence of machines, in order to produce a thread of yarn of the required thickness or counts. Each and every process involves expense and as already stated, one of the objects of high drafting is to produce the same thickness of thread by fewer processes, or by employing fewer fly frames at each stage, and using a coarser hank roving. It is obvious that the use of either of these methods must effect some economy, and yet it may appear that the resulting economy might not be very considerable. However, the fact cannot be ignored that, apart from the labor cost on the fly frames, there would be many other economies effected. To name a few of these, the following may be cited: (1) less capital outlay on machniery and buildings; (2) less power; (3) less maintenance; (4) less lighting; (5) less oil, belting, etc.; (6) less floor space; (7) less insurance.

Regarding the first item mentioned, that of capital outlay, when one passage of the fly frames is eliminated, there is a reduction in the total number of fly frames of 40 per cent or more. Even in cases where a fly frame process is not eliminated—a coarser hank roving being made at each stage and the doublings preserved—there is, also, approximately a similar reduction in the total number of fly frames required. With reference to possible reduction of floor space in the card room, the area of the card room floor can be anything up to 30 per cent less when high drafting is employed. This is

(Continued on Page 40)

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[*] Paper read before the members of the Bolton and District Managers, Carders and Overlookers' Association.

OUR telephone rings! A large hosiery company is on the wire. "We just got a rush order from an important customer. We've got to make immediate shipment. But we're short on transfers. How soon can you turn some out?"

"How many do you want?" we ask—"Five thousand? We'll have them over to you in an hour!"

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Kaumagraph does it by preparing in advance for just such an emergency... We keep a substantial supply of transfers *in stock* for every active customer, replenishing his stock as soon as it is depleted.

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INSTITUTE FOR RESEARCH IN SOCIAL SCIENCE

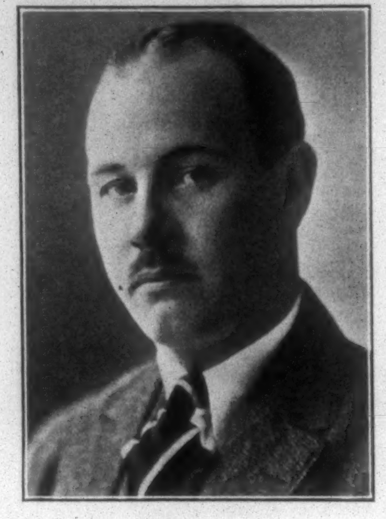
What You Will See At The Exposition

IN this issue we begin publication of advance descriptions of the various exhibits to be shown at the Southern Textile Exposition, to be held in Textile Hall, Greenville, S. C., October 15-20.

Other exhibits are to be described in succeeding issues until all have appeared.

The photographs used in connection with these descriptions are those of representatives of companies who have space at the Exposition.—Editor.

Aluminum Company of America, Pittsburgh, Pa., will have a display designed to illustrate the many applications for aluminum in the textile industry as well as some more general applications.



G. G. Brown
David Brown Co.

The following plan to be present: Samuel K. Bushnell, R. C. Bradbury, W. B. Vogts and Ernest Ohnell, Jr.

American Schaeffer & Budenberg Corp., Brooklyn, N. Y., will show their complete line of American indusrial instruments at the Southern Textile Exposition. This includes American dial thermometers for dye vats, dyeing machines, etc., American precision temperature controllers, American recording thermometers, American recording gauges, Amercan Chemical gauges, American steam traps, and American tachometers.

The Southern representative, R. W. Neel will be in charge.

Allen - Bradley Co., Milwaukee, Wis., will have an operating exhibit to demonstrate the velvet smooth control that is obtainable through the use of Allen-Bradley graphite compression resistance starters. In other words, they will demonstrate to the textile engineers that their textile machinery can be accelerated smoothly through the use of their starter.

They will also have on display their various types of across-the-line motor starting switches ,together with such list of accessories in control as are used in the textile industry.

G. O. Wilms, chief engineer, will be in attendance at the convention. M. H. Hallenbeck, manager of their Boston office, who looks after the textile industry throughout the New England States, together with E. H. Gilliam who travels the North and Souh Carolinas, and Georgia territory and F. L. Loock, general manager are also to attend.

R. S. Armstrong & Bro. Co., Atlanta, Ga., will have desk space to interest the mills in more and better machine shop equipment. Most mills claim that their shops operate at loss. As they have better working conditions than the average shop and necessarily must employ a number of mechanics as loom fitters and upkeep men, there is only one reason why they can not operate their shops on a very profitable basis, and that is because the mill executives are not interested enough to investigate what they really need in the shops and install a reasonable amount of modern equipment.

They pay especial attention to cotton mills machine shop business, specializing on electric welding equipment and machinery for making up gear blanks, cutting the gears, and cutting the keyways for same.

L. B. Jones will be on hand to demonstrate and explain the Velvetarc electric welding machines. They will have one of these machines located as close to the Hall as possible.

American Moistening Company, Providence, R. I., will exhibit the following items at the Southern Textile Exposition: New ideal humidifier, Acme humidifier, sectional humidifier, Amco automatic humidity control, atomizers. All of the foregoing will be in actual operation.

Armstrong Cork Company, Pittsburg, Pa., plan to show the various types of Armstrong's seamless cork cots which are now on the market for cotton mill use, and in addition they plan to have in operation a cork cot assembling machine and a cork cot buffing machine.

They shall also probably exhibit Armstrong's corkboard for the insulation of mill roofs, and Armstrong's cork covering for distributing lines, cooling tanks, etc., of refrigerated drinking water systems.

Bond Foundry and Machine Company, Manheim, Pa., expect to have a moving exhibit of Bond truck casters.

They will also display several new types of truck casters; among the most important will be the new Bond Les-nois steel caster.

Barber Asphalt Company, Philadelphia, Pa., booth will consist of all types of asphalt shingles, together with liquid asphalt paints. They will also show samples of Trinidad built-up roof. In fact, they will be able to handle anything in the way of asphalt roofing, together with asphalt waterproofing.

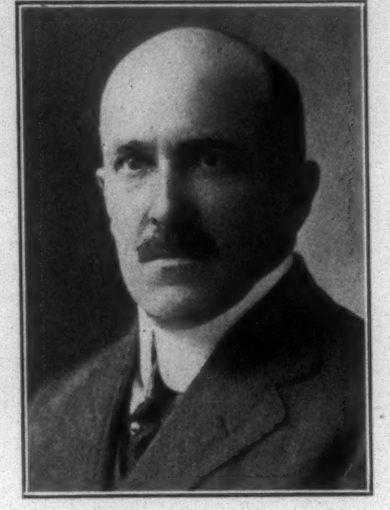
The following representatives wiil be on hand at the Exposition: F. P. Smith, Columbia, S. C.; R. L. Sutherland, Monroe, N. C.; F. E. Seeger, Baltimore, Md.

Bull Dog Electric Products Company, Detroit, Mich., will show Bulldog controlling and distributing apparatus for electric light and power as follows: Bulldog safety switches, Bulldog universal light and power panel boards and cabinets, Bulldog saftofuse feeder panel boards and cabinets, Bulldog safety fusentors and saftofuse.

These products will represent advanced designs in this type of electrical apparatus and will merit the attention of all electrical engineers. L. E. Lewis, of Charlotte will be in charge.

The David Brown Company, Lawrence, Mass., will display samples of their full and complete line of bobbins, spools and shuttles for every textile requirement. The space number is 123. The treasurer, Geo. G. Brown and their president, David M. Brown will be in attendance during the entire show. Several unique features of lighting and methods of displaying their products will be shown. Their exhibit will be entirely different from anything they have used before or used before by any one in their line of business, the company states.

Barber-Colman Company, Rockford, Ill., is preparing to exhibit an 80-spindle automatic spooler and a high speed warper, both in operation. The automatic spooler operates at a winding speed of 1200 yards per minute and is equipped with a Weaver's knotter. This provides an automatic tie-up from the bobbin to the package and of course eliminates the human element besides greatly increasing the production per spooler operative. The high speed warper operates at 500 yards per minute and the most important feature of this machine is the low and uniform tension under which the beams are warped at this high speed. The result is much better warps which, of course, means better weaving and increased weave room production.



Edwin Howard
Fales & Jenks Machine Co.

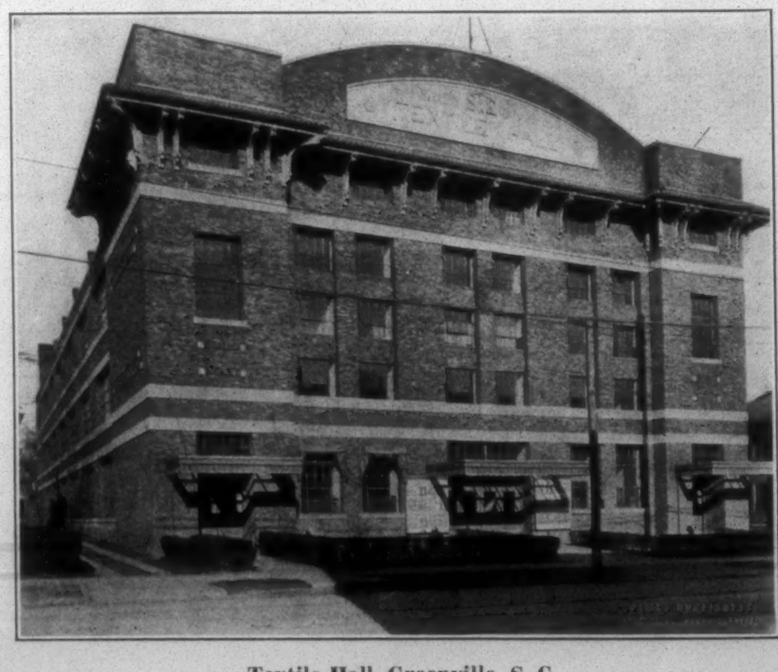
The exhibit will be in charge of John H. Spencer of Greenville, N. H. Alford and S. R. McElroy.

National Ring Traveler Company, Providence, R. I., will make a comprehensive display of the product emphasizing the Wentworth double and Wentworth gravity spinning travelers and also the Wentworth improved twister traveler. The exhibit will be in charge of the Southern agent, C. D. Taylor, who will be assisted by the Southern salesman of the company, L. E. Taylor, H. L. Lanier, and J. K. Moore. P. C. Wentworth, treasurer, will also attend.

Cooper Hewitt Electric Company, Hoboken, N. J., will have an exhibit at the Southern Textile Show consisting of examples of industrial lighting, particularly with reference to the textile trade.

Cooper Hewitt lighting is increasing rapidly in the Southern textile districts and they will have data available covering this particular field of activity.

In addition there will be on ex-



Textile Hall, Greenville, S. C.

hibition a Cooper Hewitt test cabinet which is the accepted standard for all phases of dye testing. This will be of particular interest to the many Southern mills which are develoipng dye house facilities.

Their exhibit will be located in space No. 111 in the main building, with the following in charge: Chas. F. Shrebig, sales manager; G. R. Grandy, commercial engineer; W. W. Becky, regional manager; C. N. Knapp, Charlotte; J. W. Blackwell, Charlotte; F. E. Keener, Knoxville.

The Fafnir Bearing Company, New Britain, Conn., will show their complete line of ball bearing transmission equipment such as hanger boxes. blower and fan boxes, pulleys, etc., as well as most of their line of special textile applications such as picker, beater and fan boxes, spinning frames boxes, slasher boxes, etc. A number of these units will be mounted on a frame with shaftings and the eight or nine shafts on this frame will be driven by a 1-40 horse power motor to show the frictionless operation of ball bearings. Competent engineers will be on hand to explain the ease of application of their wide inner ring bearing and to point out the applications of the various special textile units.

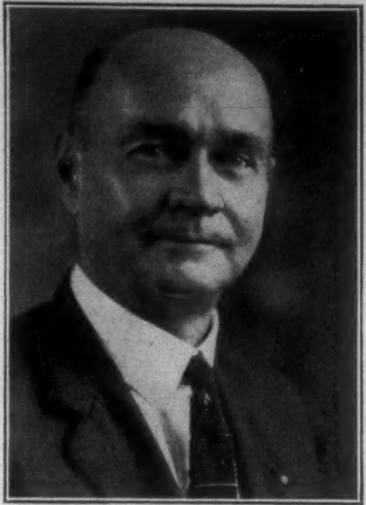
Those in attendance will include: R. N. Hemenway, vice-president and manager of the industrial division; H. R. Reynolds, chief engineer; A. G. Laughridge of Atlanta, S. D. Berg of Charlotte, S. M. Powers of Birmingham all textile sales engineers and S. M. Cooper, advertising manager.

The Fisher Governor Co., Inc., Marshalltown, Iowa, will have on display, the Fisher type No. 33 steam trap, the type No. 1 Fisher constant pressure pump governor, type No. 444 Fisher excess pressure boiler feed pump governor, the type No. 255 Fisher drip pocket sediment strainer, and the series 90F Fisher steam pressure regulator.

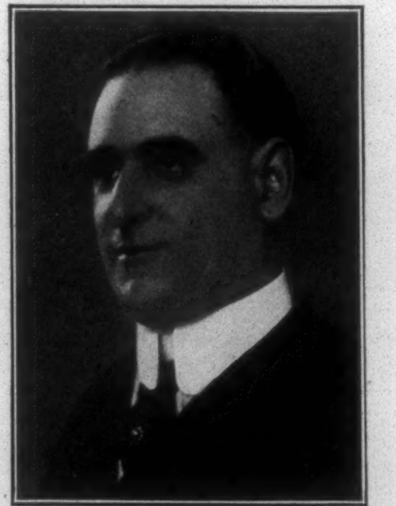
Fidelity Machine Company, Philadelphia, Pa., will have on display one No. 2-17 carrier four head braiding machine set up for making tying tape and equipped with individual motor and chain drive. This is a very economical unit of its type and may be moved from one part of the mill to another. By simply applying the current, the machine may be started in operation. Among other advantages in this machine, is that when one head stops, all other three keep on going, and this is a great saving to any mill operating a large line of braiding machines.

They will also have on display one of their 5-strand rug braiders that have been sold extensively

J. T. Wardlaw
Lockwood-Greene, Engineers



D. H. Wallace
Keever Starch Co.



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HOMOGENEOUS
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Colors of excellent fastness to light and washing.

Recommended for use alone or in combination on all vegetable fabrics and rayon.

Well adapted for machine dyeing.

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for orange shades of remarkable brightness

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for fine bright scarlet-red shades

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Indanthren Navy Blue R
for full shades of navies of unusual clearness

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PERKINS
Practical
Brush

Let Quality Decide

Brushes look very much alike. Lay them side by side and you cannot always see the difference — but put them into service and watch their cleaning mileage. What a difference! That's why textile mills all over the South use Perkins Practical Brushes exclusively. They have let QUALITY make the decision for them. Now they stick to these guaranteed brushes that always do the job right and keep on doing it right long after ordinary brushes have been thrown into discard.

The illustration shows our famous No. 164 Perkins Practical Loom Duster. Like all our brushes this is a specially engineered product. It is guaranteed to give you positive satisfaction. Write today for illustrated folders and price lists.

For every textile need, we make a suitable Brush

Atlanta Brush Co. Atlanta, Ga.
P. O. Box 1358

Guaranteed
Textile
Brushes

EMMONS LOOM HARNESS COMPANY
The Largest Manufacturers of Loom Harness and Reeds in America
Loom Harness and Reeds
Slasher and Striking Combs, Warps and Leice Reeds, Beamer and Dresser Hecks, Mending Eyes, Jacquard Heddles
LAWRENCE, MASS.

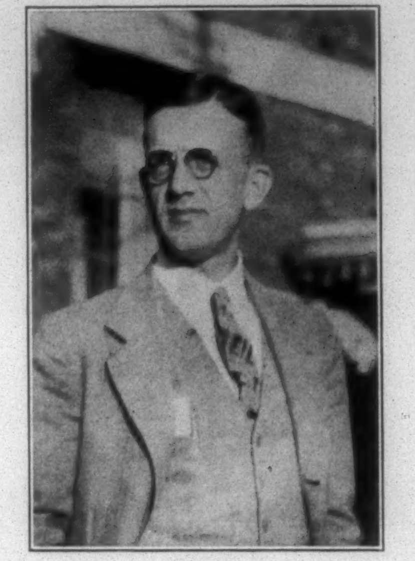
Mathieson Alkali Works, Inc., New York, expect the feature in their exhibit to be a special display piece made up of a grouping of their various sizes of liquid chlorine and anhydrous ammonia cylinders.

They will also have displays of their packages for other products sold to the textile industry, together with literature covering their use.

The exhibit will be in charge of J. R. Schmertz, advertising manager; J. W. Ivey, technical representative; E. M. Rollins, technical representative, and Fred O. Telson, Southern sales manager.

throughout this country for making all types of fancy and plain braided rugs. Mills, having a large amount of waste, that can be put on a good sized bobbin, can employ one of these machines and by the purchase of a sewing machine, they can easily get into the rug business and show a profit on their waste.

They will also exhibit one of their Fidelity universal ribbers, set up for the manufacture of men's rib half hose tops. This machine has been sold extensively throughout the hosiery mills in the South, and in every instance, has met with a great deal of approval.



H. M. Barker
Taylor Instrument Co.

T. C. Hazard
Taylor Instrument Co.

E. A. Terrell
Terrell Machine Co.

Robt. I. Dalton
Whitin Machine Works

The following representatives will be present: H. W. Anderson, A. S. Johnson, Jr., S. A. Blaisdell.

The Merrow Machine Company, Hartford, Conn., makers of high speed trimming and overseaming, overedging, plain crochet and shell stitch machines, will occupy Space No. 320.

Among the machines which will be shown in operation special mention may be made of two new models, styles 60ABB and 60D3B, for trimming and joining in one operation ends of cotton and woolen piece goods in flat butted seams to facilitate subsequent processing. By eliminating the need for lapping the material, goods pass uninterrupted through finishing machines for a great variety of processes, with remarkable saving both in labor and fabric.

Another new model which will be shown is style 60RD, a 3-thread machine, especially adapted to make a strong and attractive edge finish, either straight or scalloped, for rayon bedspreads and many other fabrics of a loosely woven character.

The exhibit will be in charge of the company's resident sales representatives, E. W. Hollister who, with headquarters at Greenville, covers the States of North and South Carolina; and R. B. Moreland of Atlanta, Ga., who covers the States of Georgia and Tennessee. It is expected also that representatives from the Hartford office will be present.

National Bundle Tyer Company, Blissfield, Mich., will exhibit two or more machines adapted to the bundling of various textiles such as bolts of cloth, sheets, pillow cases, towels, and so forth.

These machines use either string or tape. They propose building a special machine for this convention to handle sheets in dozen lots. Their experiments along this line have been successful but they never went far into this trade. This machine ties tape around each end of the bundle at the same time. The operator simply places the bundle upon the feeder and passes it into the machine, this automatically trips the tying machanism when the bundle is tied. The complete operation can be made in less time than a second. The machine is of all metal construction the same as all their other tying equipment.

George B. Snow
Atlanta Brush Co.

O. G. Culpepper
Parks-Cramer Co.

John L. Dabbs
E. I. DuPont de Nemours Co.

Guy Melchor
Howard Bros. Mfg. Co.

Hyatt Roller Bearing Company, Harrison, N. J., will exhibit as usual at the Textile Show. Their spaces are Nos. 81-82-83 and 100 in the permanent annex.

They will show the latest applications of Hyatt roller bearings as applied to textile machinery of all kinds.

Hyatt line shaft boxes for easy installation, and Hyatt roller bearings for easy change over to existing textile equipment, will also be shown.

Among the Hyatt representatives attending the show will be H. J. Forsythe, president, H. O. K. Meister, general sales manager, H. K. Porter, manager Eastern division, George H. Woolley, manager Eastern line shaft sales, Paul Scott, Southern representative, Frank Naughton, New England representative, H. M. Carroll, advertising manager.

Huntington & Guerry, Greenville, S. C., will be in space No. A-138 in the wooden annex, first floor.

R. S. Huntington, DuPont Guerry, Jr., and L. J. Spiers will be in attendance. The exhibit will feature electrical installation service for textile mills and the value of good industrial lighting. General Electric refrigerators and water cooling systems will also be featured.

U S Bobbin & Shuttle Co., Providence, R. I., is planning an exhibit this year that will prove of unusual interest to the trade. No effort is to be made to show anything like

(Continued on Page 35)

ORIGINAL and GENUINE
"The Leather with the Hair on"

Bondaron
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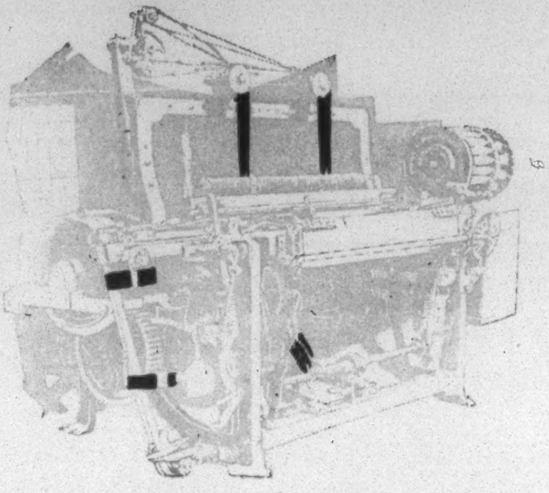

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QUALITY

LEATHER

Textile leathers are small items individually, but when you add up the costs of all leathers used for the past several years, the items amount to a pretty good sized bill. Add to this cost the time lost from stoppages and replacements of straps and the like, the cost of picker stick breakage on account of poor lugs, and the item will still be somewhat larger.

Thorough tests have shown that "Bondaron" Leathers last from three to five times as long as other leathers on the market. You can at least cut your loom leather costs in half with "Bondaron" products. The secret of their long life and incomparable service is superior quality hides tanned by a well guarded special process which adds greatly to the tensile strength, pliability and general serviceability.

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Products for all textile leather Requirements

Other products made from Bondaron, Bondural or Bondex Leathers:

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Shuttle Straps
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Loom Pickers
Cone Belts
Round Belting
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Twister Cots
Condenser Aprons
Worsted Aprons
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Picker Leathers
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English Sheep Skins
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Leather Curriers and Manufacturers of Belting and Textile Leathers

617 Arch Street **Philadelphia, Pa.**

Faulty Selvedges in Cotton Cloths *

By W. H. Guthrie

LOOKING over the cloths made today, one is struck with the changes that are taking place in the style of cloth construction in vogue. Pre-war we had goods made comparativey low in the ends per inch, warp way, and with a high number of picks per inch, such as moreens, roya ribs, sateens, peannettes, etc. Today, we have the exact opposite of this. We have poplin styles, where plain cloths are made with as high as 220 ends per inch of 2/100's, and as low as 30 picks of 3/20's per inch, in the same cloth, while warp satins with 160 ends and 84 picks per inch, are taking the place of sateens. In the furnishing trade we have warp satins 180 x 34 2/80s Egyptian warp, 5's condensor weft. Similarly, we have repps made 150 x 28 per inch, with a high-grade Egyptian warp and coarse American weft. Again, the poplin styles have degenerated from high-grade two-fold warp and weft to low grade single yarns.

This is followed by the fact that the dyer and finisher is expected to give similar results on these low-grade cloths as those previously given on the better cloth. As the standard of finished goods is much higher today than twenty years ago, the finisher naturaly asks that the grey cloth sent to him should be carefully made, and that every possible attention should be given to avoiding the production of faults which will cause damage to the cloth in the later processes. Undoubtedly many faults are made in cloth without any idea as to what they might mean later. Perhaps the commonest of these are faulty selvedges.

A Cause of the Trouble.

Examining very many cloths, we find that the bulk of the trouble is caused, not by using a common low-grade yarn in the selvedge and too little of it, but exactly the opposite. Most of the trouble is caused by using hard twisted two-fold yarn, usually of too coarse a count, and cramming the ends too close together in the reed when drawing in the warp. One of the common types is a cloth with corded edges, caused by several threads being drawn in together and lifted as one. In lightweight goods such as nainsooks, mulls, etc., which are mostly finished with a high polish, a corded edge results in the weft being cut with the pressure put upon the cloth in calendering, a process which is essential to the finish required. The greater evil attendant upon this trouble is that at the stage where the cutting takes place, the cloth usually contains a considerable amount of moisture and adhesive filling, which prevents the loosened threads actually breaking away from the body of the cloth, and therefore the damage is perhaps not actually detected until the goods arrive in India, or elsewhere abroad. This gives an unscrupulous dealer every opportunity of bringing forward an enormous claim which in reality is caused by what many makers would consider as only a trivial departure from the best weaving practice. Recently we had a case where as many as fifteen ends had been drawn in together as one.

A "Boat Side"

Another type of corded selvedge occurs in sateens, warp satins, jeannettes, etc., when what is known as a boat-side is put on to the cloth.

The catch end, or ends, used at the outside edge gives a very faulty construction, and as often two or more thick two-fold threads are drawn as one, these give a corded edge which is often cut off, more especially as these only interweave like the ground of the cloth.

Similarly, corded edges occur in the case of plain sides.

Tight selvedges also occur in the case of plain sides.

In casement cloths, flannelettes, etc., where a low reed cloth made with medium counts of warp and a coarse weft is used, such as 48 x 64 per inch, 32's warp and 16's weft, the selvedges are often made of 2/40's Egyptian, and the ends drawn two in a dent as in the body of the cloth. These ends, being coarser, lay closer together than those in the rest of the piece, with the result that there is not sufficient room for the weft between them, and the milling up, which usually is divided between the warp and weft, is forced to be taken up by the warp with the result of a tighter woven selvedge, shorter in length than the body of the cloth. This is further faulty, since the two-fold yarn has not the stretch nor elasticity of the soft spun warp yarn. It is needless to say that when these goods are under tension in mercerizing and similar processes, the selvedges often break, due, not to their being poor quality yarns, but to the fact that the ends are packed too close together.

In goods like sateens, etc., where plain edges are put on to a cloth of a different weave, this fault is magnified, since the milling up in weaving plain cloth is greater than in the sateen. In jeans, Florentines, satin drills and similar weaves, curling at the edges is common. This can be avoided by using a plain or

(Continued on Page 32)

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* Official proceeding of the Burnley and District Managers' Association, report in The Textile Weekly, Eng.

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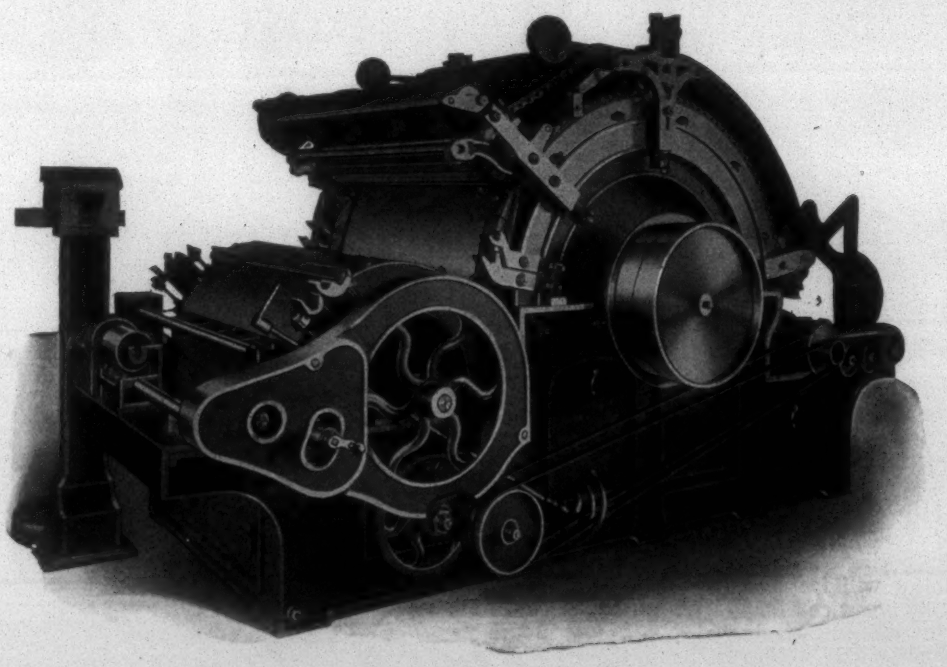

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COTTON MACHINERY

Seeing the Cotton Fields

By DAVID CLARK.

HAVING engagements to speak at St. Louis, Mo., and Guthrie, Okla., and also business at Dallas, Texas, and Little Rock, Ark., I thought that I would have an opportunity of seeing much of the cotton belt and that I could write for the Southern Textile Bulletin impressions that would be interesting.

I overlooked the fact that as my engagements were in the day time I would travel at night and during the entire trip I really saw comparatively few cotton fields.

I left Charlotte on Monday night, August 27th, and awoke the next morning after my train left Atlanta, and was on the way to Birmingham. I had covered the area between Atlanta and Birmingham twice since June 1st and knew that there were very bad stands almost the entire way.

On this trip I could not see that there had been any improvement, for in addition to the bad stands the plants appeared to be very poorly fruited and had a yellow, sickly look.

Occasionally there was a good field but they were very rare and I do not think that the cotton from Atlanta to Birmingham is over 50 per cent as good in appearance as the average in North Carolina and South Carolina.

Beyond Birmingham the cotton fields had a slightly better appearance but were still very poor.

Before reaching Memphis, Tenn., we passed through a considreable area of Mississippi and it was there I had my greatest surprise, for I had heard that cotton in Mississippi was very good.

It may be good in other sections of Mississippi but I saw very few fields that were 70 per cent as good as the average in North Carolina. The plants were small and poorly fruited and in the bottom lands the stands were very poor. I saw many fields in which there was not over 50 per cent of a stand.

Night came on before I reached Memphis and I awoke next morning in St. Louis.

I went by sleeper from St. Louis to Kansas City, where I spent a day, but there is no cotton raised in that section.

I again took a sleeper from Kansas City to Guthrie, Okla., but had the opportunity of observing the cotton for about fifty miles before I reached Guthrie and found it much better than in Alabama and Mississippi, but not as good as North Carolina. The plants appeared to be small and not very well fruited but the stands were good.

At Guthrie I had an opportunity of talking with men from several sections of Oklahoma and found a somewhat divided opinion but nobody seemed to expect the crop to be much larger than last year.

Two prominent bankers were of the opinion that the ultimate outturn would be much less than last season.

I drove that night, with a friend, from Guthrie to Oklahoma City and at 11 o'clock took a sleeper for Dallas, Texas, expecting to reach there the next morning at 7 o'clock, but during the night an effort was made, presumably by train robbers, to wreck our train.

A rail had been tampered with, but fortunately for us a single engine running rather slowly crossed that point about two hours ahead of us and ran off but was stopped before any serious damage was done.

The track was repaired but the would-be robbers again tampered with it and put it in worse shape than before.

Fortunately our engineer had been cautioned to watch that point and was able to stop the train before he hit it. The attempt at wrecking was on a high fill just as the train reached a large creek and had we come upon it at full speed great loss of life and damage would undoubtedly have resulted.

Repairing the track delayed us four hours and I awoke next morning with the train still north of Gainesville, Texas, and had an opportunity of observing the fields from there into Dallas.

There were some fields that looked good but all the plants were small and none seemed to be especially well fruited.

About fifty per cent of the fields were dotted here and there with areas in which grass had grown higher than the cotton and I assumed that in these areas there were no cotton stalks as the result of poor stands resulting from the wet spring.

There were also many dark brown areas, sometimes only a few feet across and sometimes forty or fifty feet wide in which every cotton stalk was dead. In some cases there were a few bolls of cotton at the bottom of the dead plants.

I do not know what caused these dead areas but they and the grass areas showed against the green of the cotton plants in many fields and will of necessity reduce the yield of cotton.

Arriving at Dallas about 11 o'clock I was fortunate in being able to fill my engagement and left at 2 o'clock for Illinois on a route that was to carry me through Arkansas but darkness came on before I reached the Arkansas border and I did not have an opportunity of observing any of the cotton in that State.

From Dallas as we went towards Arkansas and until darkness came the cotton was very much the same as I had been north of Dallas.

There were not so many dead areas in the fields but the plants were smaller and many fields with poor stands were noticed.

I am not familiar enough with Texas cotton fields to say whether or not those I saw were normal and I know that Texas cotton fields in their best years do produce an average lint yield per acre equal to that of the worst years of North Carolina cotton.

(Continued on Page 30)

Plant of Jacques Wolf & Co., Passaic, N. J.

Chemical Specialities for Cotton

Soluble Oils
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Practical Discussions By Practical Men

The Practical Discussion Department of the Southern Textile Bulletin is open to all readers whether they are interested in seeking information on technical questions or are willing to help "the other fellow" who has experienced trouble in some phase of his work.

The questions and answers are from practical men and have often proved extremely valuable in giving help when it was urgently needed.

The interchange of ideas between superintendents and overseers develops a great deal of worth while information that results in much practical benefit to the men who are concerned with similar problems.

You are invited to make free use of this department and to join in discussing various problems that are mentioned from week to week. Do not hesitate because you do not feel that you are an experienced writer. We will take care of that part of it.—Editor.

Breaking Strength Low.

Editor:

I would like to get a bit of information on our line of work. We are making 13s 3—3 ply and 15s 3—3-ply tire fabric, using 1-16 staple middling cotton. We are making a 14-ounces lap with a 62 grain card sliver. Drawing is 63 H. R. fine drawing 65 H. R., slubber 50 H. R., intermediates 99 H. R., speeders 270 H. R. All of the above is around standard. Our rolls on spinning are closed top and bottom, other rolls set to standard, but our break in the card room is a little low. If anyone can give me any help, it will be appreciated. Tirspin.

Figruing Costs.

Editor:

I would like to have a fair estimate of costs in the different departments. What is a fair cost to spin 13s, also 15s? What should be the cost on spooling? What is a fair carding cost?

We run day and night in all the above departments. Supt.

Metal Polish.

Editor:

I would like to ask through your Discussion Department for a good formula to make metal polish for cleaning sliver table on combers. Is it more practical to make a polish or to buy one ready for use?

Anxious.

Weave Room Production.

Editor:

Will some practical mill man give me a practical and correct method or rule to find the average per cent production in pounds produced in a weave room where we have three or more loom speeds and several different weights and picks of cloth.

System.

The Cleaning of Looms.

Editor:

How much time should it take to clean 40-inch Draper looms?

L. M. W.

Loom Doffing the Bobbin Too Often.

Editor:

What causes an automatic loom to doff the bobbins prematurely?

Loom.

Cloth Woven Per Filling Bobbin.

Editor:

On filling sateens how much cloth should be woven per bobbin when weaving 88 picks and how many minutes should it take to run the bobbin out on 30s yarn.

W. T. K.

Answer to Superior.

Editor:

What is the best way to handle the cuts of cloth taken off of the looms to be transferred to the cloth room? Some mills put the cuts of cloth onto raised platform racks. Others stand the cuts of cloth on the floor near the loom from which it has been doffed. Both ways are not the best way. Cloth which is put onto stationary racks has to be transferred to movable trucks which involves extra labor. White cloth which is stood up on the floor often becomes soiled. The best way is to have some boxes made of galvanized iron, under which are fastened truck wheels. The bottom of these boxes should be made of slats which prevents the accumulation of dirt, etc. These boxes are placed at convenient locations in the weave room. When filled with cuts of cloth, they are truck to the cloth room without rehandling. Wooden boxes will not do, because they get full of slivers and which often tears the cloth.

Cloth Room.

Answer to R. R.

Editor:

Regarding a recent question should I increase the weight of laps over 36½ pounds net. I would increase them to 42 pounds. This will save excessive doffing of laps at the pickers, and greatly reduce the replacement of laps on the cards and tend for better work. Expert.

Answer to C. P. O.

Editor:

Is a draft of six too much for a drawing frame? The answer is that some leading mill men today feel that it is best not to draw six on drawing frames. They feel that the card sliver should be lighter and that a draft should not exceed 5 to 5½ on drawing frames.

Expert.

Answer to Ga.

Editor:

What would be a good arrangement of a good filling sateen selvedge on a five harness weave? My answer to this question is as follows: 36 ends on a side. One end in each drop wire, 3 ends in a harness eye, and 6 ends in a dent. The selvedge motion to shed on every other pick to weave a basket weave with two picks in a shed. This will make a very nice acceptable selvedge. I. C.

Going Strong at 49.

Editor:

I have read with quite a little interest as well as amusement the different articles for and against the man 40 years of age.

To begin with I wish to say that I am well over the deadline (should you consider 40 years that mark) but I have not seen that young man yet that covers more floor space than I do. That recalls to mind that some two years ago a young man came to my mill on business that carried us throughout the mill from first to the fourth floor. This young fellow asked me to begin with if I was a fast walker, said he was real fast and did not know whether I could keep up or not. I said "Well, I will try." Well, before we were through I said to myself, "Well if you are fast I am a Walter Johnson."

In my opinion the majority of men 40 or more that lose out do so on account of not keeping up with the times. Years ago when a couple married the first thing the girl did regardless of her age was to do her hair up in a ball on top of her head, put a frill on her already long dress and take one corner of the fireplace.

The boy changed from cigarettes to a pipe, from a light tie to a black one, and he occupied the other corner.

The results were they were an old couple at 30 years of age.

But now even as I write this my wife who has just given her daughter her twentieth birthday present is sitting by with a dress on that will hardly hide her knees.

Now this same thing applies to overseers. They grow old too young. I am superintendent of a mill and my overseers' ages range from 24 to 50 years. My oldest man is one of the most up-to-date men I know of. Why? Because he has kept up with the times and has changed with them. In other words he has stayed young regardless of his years.

My youngest overseer is a college graduate, and since I found some difficulty in getting a man to fill this particular place I decided to train up a man. Naturally I wanted a young man who was not set in his ways and could be flexible enough to apply himself to existing conditions.

You old fellows who are complaining about the young man being promoted, look around and see what your faults are.

One of the greatest sermons I ever heard preached was from this text, "Examine Yourself."

"49."

The 40-Year-Olds.

Editor:

I have been following the discussions on the 40-year-olds in the Bulletin now for some time and really I think too much has been said already, and especially in some respects. First I want to say that "Traveler" has made about the most sensible reply I have read yet.

I want to say I am a young man thirty years of age. I am overseer of a very good size weave room. My job runs a good production with a very satisfactory per cent of seconds. We all know men of forty years and more that are on jobs and are running them in all lines of the textile industry. A man at forty has lots of good capable service to render if he will and is willing to do so, but I know some cases where an overseer at forty years is just out of luck when it comes to meeting the present-day conditions.

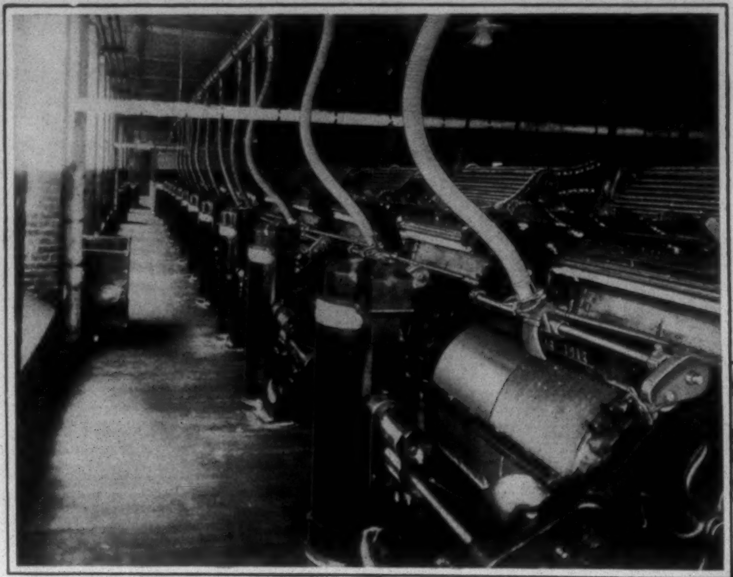
A man at forty realizes he has just about gone up as high as he is likely to go, and it seems that most of them are content with the mark they have made in the past, and simply don't care to try to better that mark. I have grown tired of having men boast of what they have done and always putting the emphasis on the "have."

A man that has a good reputation should be proud enough of it to keep it by continuing to keep after his job.

A young man knows he has his mark to make and for that reason he is always pushing his job, and doesn't wait for the superintendent to come through his room and catch him by his ears and lead him up to something he should have seen long before. I know it is true in some cases that the young men have a pull in some way, and it is also true with the forty-year-olds, because some of the forty-year-olds I have worked for could not have stayed on a job without a pull.

One reason lots of the forty-year-olds are losing out is because at this day and time with the strong competition we have, an overseer can not sit in his office or at his desk

(Continued on Page 32)



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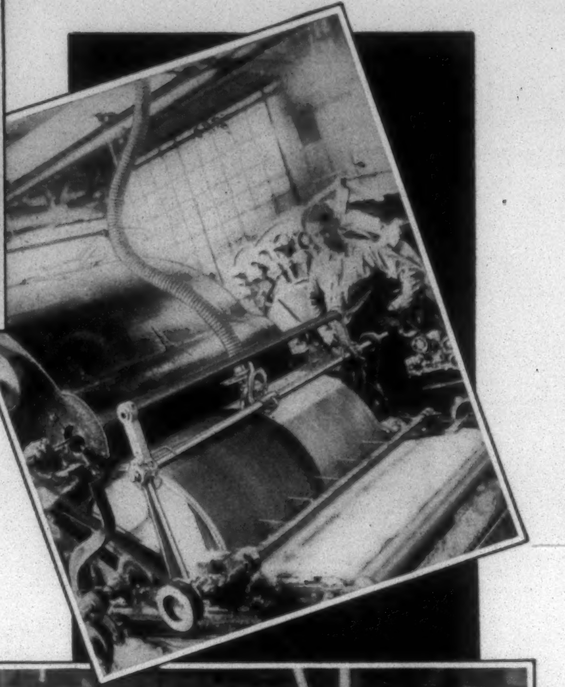

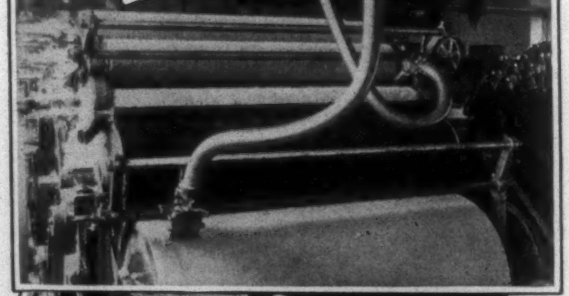

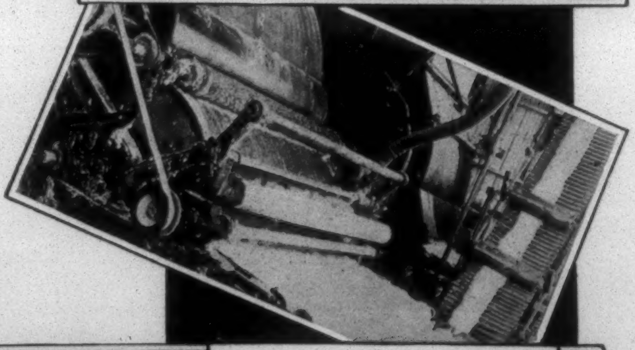

Good Carding Depends Upon the "Point and Bend" of Your Card Wire

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Stripping with a wire brush or any device where metal-to-metal contact takes place, not only makes the points dull, but it misplaces the angle or "bend" and often loosens the wire foundations. That precision which makes good carding is destroyed. "Grinding" only restores the "point." It does not correct a bent or loosened wire.

The Triple-Vacuum System strips your cards by air—4 at a time—without stopping your cylinder. It strips *clean* without metal-to-metal contact, without wear or tear of clothing. It reduces the number of grindings and increases both the output and quality of your work. And in addition—this system picks up every wad of waste and dirt from machinery and floors and conveys it direct to your waste house at any distance. The savings in cost of handling waste pay for the equipment. Send for free mill analysis to the office nearest your location.

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Abington, Mass.

Fred H. White, General Manager

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The Standard Card-Grinding Medium
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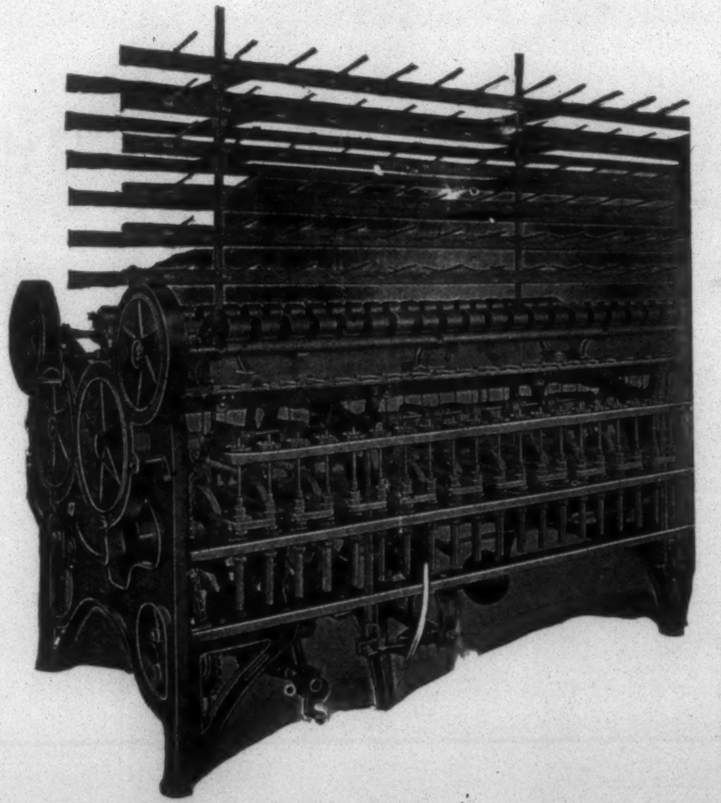

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15—Tape Driven Twisters 200 Spindles each, 2½" Ring, 3½" Space, 5 or 6" Traverse. CLUTCH SPINDLES, also bobbins for same.
These are in first class condition. Prices right.
COLLINS BROTHERS MACHINE COMPANY, Pawtucket, R.I.

Newspaper Items On Textiles 161 Years Ago

By Geoffrey E. Govier.

READING through a file of the London Chronicle for 1767 I came across several notes in connection with the textile industry that I thought might be of interest to readers of the Southern Textile Bulletin. The first is in the issue of April 7, 1767, in an editorial discussing conditions in North America, and in view of the tremendous agricultural development of today it is interesting to read their view that "notwithstanding the many colonies we have in North America, they hardly produce any of those commodities of which the Nation is in most want, and considering the poverty of the soil, with the very singular and unfavorable climate, they do not contain land enough to maintain the inhabitants, and at the same time to supply the Nation at home with these commodities which it wants from them. The climate in the northern colonies and the barrenness of the soil in the southern; render them unfit to produce anything of consequence, more than the bare necessaries of life for the inhabitants. The middle colonies again are mostly worn out with their exhausting culture of tobacco and Indian corn. The chief products of these colonies are tobacco, indigo, hemp and flax, which can only be made to any advantage on fresh wood lands, and these are now in a great measure exhausted. Their lands do not produce above a third part of what they used to, while the people are twice or thrice as numerous, and require the produce of their lands for their own use; to which the bad state of the colonies is owing, and is daily growing worse by the increase of the people, the wearing out of their lands, and failure of their staple commodities. To improve this condition it appears absolutely necessary that they cultivate on their plantations such commodities as can be used by Britain, the chief of which are silk, wine and oil. But instead of these we think of nothing but hemp and flax, which are both unsuitable to their soil and climate, and are insufficient to maintain such a number of people. Secondly, they should extend their settlements to the Mississippi and Ohio, as no other part of that continent will produce the commodities that are wanted from it."

The next item is an advertisement, showing the prices of manufactured goods at that time. For convenience I have converted the English money to American dollars. The advertisement appeared on April 28, 1767, and is as follows:

"Fine Yard and Half Wide Book Muslins are sold at $2.00 a Yard, at Forster & Shaw's Linen Warehouse, Charing Cross. Yard-wide Clear Muslins 50c a Yard; Striped and Flowered ditto very cheap; Ready-made Shirts of all prices from $1.00 to $1.00 a piece, and they are made to any size by Order; Irish Cloths of the best fabric, from 25c to $2.00 a Yard; fine Scotch Hollands of a strong sort, from 50c to $1.00 a Yard; Irish, Russian and Lancashire Sheeting of all Prices; Damask and Diaper Table Linen, and fine Sets; Variety of Pocket Handkerchiefs of the newest Patterns, &c."

Judging from this it is evident that goods commanded high prices.

Turning to the issue for May 23, 1767, I noticed the following news item from Ireland:

"Dublin, May 20.—In the Cambrick manufacture of this kingdom are now employed not less than 160 looms at Dundalk, where, in the short space of one year only, above 70,000 yards have been made, the greater part already at market, or sold; and it is observable, that this quantity has been made between May, 1766, and May, 1767, which shows that this important manufacture is in an improving state, and will be of the utmost national advantage, which is already obvious from the gradual diminution of the importation of French Cambricks into this kingdom."

In the same issue is a note from Charleston, S. C.:

"Charles Town, South Carolina, March '1.—All things are quiet here, save the skirmishes between the Choctaw and Creek Indians. Our Legislature is about founding of a Lighthouse at the mouth of the harbor, building of a fine Exchange for the Merchants, setting up an organ in St. Michael's Church; the pictures of the three gentlemen who were Commissioners to the Congress, and the statue of the Great Commoner near the State-house, with other ornaments for the embellishment of Charles Town.

"The interior parts of the country fill very fast with people from Ireland, and the northern colonies. The article of hemp bids fair for becoming soon a staple article. What stops its progress is the want of proper machines for breaking it; all we make now being done by hand."

On June 2, 1767, there is an official announcement of an Abstract of an Act for granting additional duties upon certain imported cloth. This abstract reads:

"The sum of $7,500,000 being authorised by the preceding act to be raised for the public service, by annuities after the rate of 3 per cent and a lottery to be attended with annuities after the like rate; and, all such annuities being, by the said act, charged upon the sinking fund, it is therefore hereby enacted, towards making good the payment of the said annuities so charged on the said fund, to grant unto his Majesty the following additional duties upon certain linen cloth imported, to take place on the 25th May, 1767; viz. For every ell of linen cloth, or sheeting, above one yard English in width (except Flanders Holland cloth) which shall be imported into Great Britain 6c. For

(Continued on Page 32)

The Take-Up of Silk Warps in Weaving

THE take-up of warps in weaving is a matter concerning which most silk manufacturers think they are well informed, but there are certain factors to be taken into account that are not usually considered, says an article by James Chittick in Black and White, published by E. F. Houghton & Co.

The practice usually followed is to figure the lengths of the warps, from which is deducted the length of the thrums, add up the length of the woven pieces, as recorded, and calculate from that how much the shortening has been.

Length of Warp.

One important factor to consider is the precise length of the warp, and it is rare to find a manufacturer who knows what the length of his warp actually is. The warping reels most generally employed in the silk mills are of what is called the horizontal type, the circumferences of which are generally exactly eight yards. Now, if the manufacturer were making a warp which was to be 800 yards long, the length would be figured on one hundred revolutions of the reel, which would be recorded on the clock of the machine, and this would be counted as an 800-yard warp. It is to be observed, that the only bands which measure exactly eight yards are the first ones of each section laid down on the reel, and, as revolution succeeds revolution, each successive band is a trifle longer, and this will vary according to the size, or thickness, of the yarn, and the ends per inch. Suppose, after the warp was completed and all wound on the reel, that the thickness of the silk above the level of the arms of the reel was ½ inch. The relationship between diameter and circumference is as 1 to 3 1-7, but for convenience we will omit the 1-7. Hence, if the diameter of the reel was 8 feet, the diameter from outside to outside of the warp on it would be 8 feet 1 inch, and the average or mean diameter 8 feet ½ inch. Multiplying this ½ inch by 3 would mean that for each revolution of the reel the length of thread wound on it would be 1½ inches longer than what the clock would show, and for one hundred revolutions of the reel there would be an added length of 150 inches, equal to over four yards, and, consequently, the recording of the length of the warp as 800 yards would be incorrect, but it should be, taking the 1-7 factor into account, about 805 yards.

Manufacturers, therefore, would do well to measure by calipers or other means, just how high above the level of the arms of the reel the upper layers of their different kinds of warps, and different lengths of warps will rise. By computing the added average circumference of the reel in the manner stated above, they would then be able to determine with fair exactness the real lengths of their warps. Of course, a more accurate figure still could be had by having the warp, as it was being wound on the loom beam, passed through some special measuring device.

Cloth Measure.

Another important matter that must be considered is that the yards of cloth as ordinarily measured, are rarely or never the yards of cloth that are actually woven. This has nothing to do with the accuracy of the measuring machine, or the care of the person who makes and records the measurements. In the loom, the cloth is held under heavy tension. When each cut is taken off, the cloth is relieved from tension, and it is either drawn off in folds, as in mills weaving goods for piece dye, or rolled on a roller which is brought to the loom and which rests on stands at each end, as is the custom when yarn dyed goods are made, the cloth springs in and becomes shorter. This shortening is in no sense a negligible factor. In the case of closely woven goods, such as taffetas, this springing back, or creeping up, will generally amount to at least 1 per cent. All manufacturers will have observed that yarn dyed goods come back from the finisher longer than they went to him. Thus, a 60-yard piece of taffeta might come back measuring 60⅝ yards, and most makers of goods calculate this as a gain. It is, however, not a gain but a regain. That is, the finisher has pulled out the goods to the length that they were originally woven, and by his treatments has set them at that length.

In the case of fabrics of looser construction, this creeping up in length will be greater. A fairly closely woven, five-shaft satin will probably come in about 2 per cent, while a cotton back satin may be expected to shorten 3 to 4 per cent. Consequently if such a cotton back satin were woven with, say 100 picks per inch (although they will usually have about 84 picks) and if 100 yards were actually woven on the loom, the 100-yard piece would measure 97 or 96 yards, as this shrinkage takes place before the measuring. Consequently, if the picks per inch in the 96 yard piece were counted at a series of intervals throughout its length, they would be found to average 104 picks. With a 97-yard piece, they would count 103 picks per inch. With a satin losing 2 per cent, 98 yards per 100 woven would be the measured length, which would count 102 picks per inch, and with a taffeta, with its approximate 1 per cent shrinkage, the piece would measure 99 yards, and it would count 101 picks per inch.

This shortening, or creep-up, has nothing to do with the take-up, or shortening of the warp in weaving.

If a manufacturer finishes his goods himself, he will find that his cotton back satin will gain 3 or 4 per cent in length, but, as stated above, this is not a gain, but a regain. If, however, they are bought

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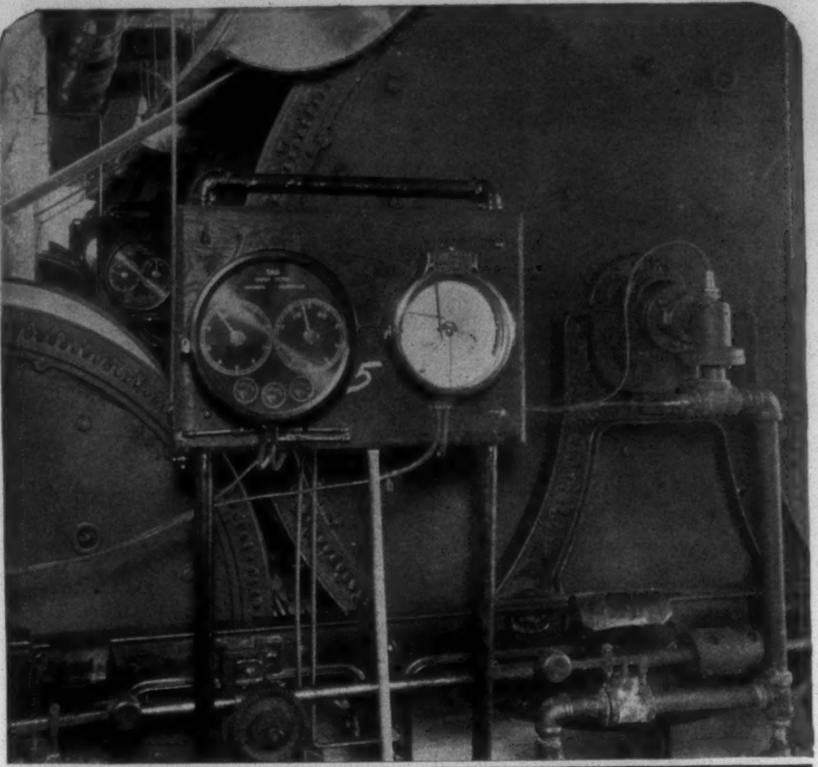

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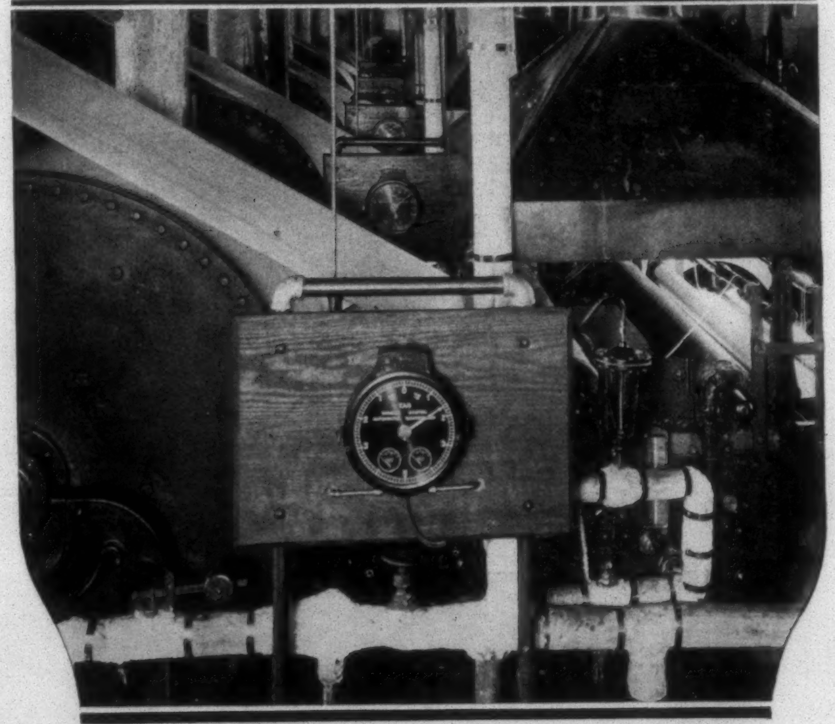

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Problems in Dyeing Rayon

By A. L. Snyder, Sales Service Section, Du Pont Rayon Co., Inc.

A GREAT number of problems arise in the dye house, which the dyer is expected to overcome, but which can be corrected more intelligently in other parts of the mill. Let us discuss a few such problems which give the dyer so much trouble and worry.

Probably the most troublesome of these is the mixing of rayons from different manufacturers. This may be done either through the ignorance or carelessness of the knitter. As you are probably all aware, no two rayon manufacturers make yarns which have the same dye index; consequently when different yarns are being run in the mill the productions should be kept absolutely separate, and the dyer advised of the make of yarn in each batch, so he in turn can correct formulae and conditions.

Condition Serious With Bottle Bobbins.

A condition of this kind can become very serious in the weaving trade, or knitting trade where bottle bobbins are used. If the yarn is not run completely off the bobbins or spools, or the tailings are not cut off, the winder hands may tie one make of yarn onto the tailings of another make, and it may be weeks before these tailings are all run off. In the meantime, each time a spool or bobbin is run below this knot of separation, a short length of yarn will be fabricated having a different dye index than the remainder. If this is being used for warp purposes, the seriousness can readily be surmised. When conditions of this kind occur, there is nothing the dyer can do to right the wrong.

Another factor which will greatly assist the dyer is the use of a knitting oil which can easily be removed. The rayon manufacturers and commercial throwsters selling rayon on cones are for the most part using oils with the necessary lubricating properties, and which can be removed with a mild boil-off. The mills who are winding from skeins, however, are very often found using oils which are very difficult to remove, and it either means lengthy boiling or strong concentrations of chemicals to effect a complete removal, with the consequential harshening and tendering of the finished goods.

Removal of Knitting Oil.

The first problem which confronts the dyer of rayon knit goods is the removal of the knitting oil. If the oil is not completely removed, uneven dye results may be obtained. In the hosiery trade this may be manifested by different shades in the same dye bath, where the lighter shades are knit from cones containing a higher oil content than the darker shades, or it may be that large blotches will be present, where the stocking has been twisted. In the dyeing of underwear tubing a barre effect may result, caused by one of the ends having a greater oil content than the remainder, and consequently less absorption of dye.

Boil-off formulae are usually given "based on the weight of the goods," similar to dye formulae. If the ratio of bath to goods is always the same, this method is as good as any, but where a long bath is used in one machine and a short bath in another, it will be necessary to base the boil-off formulae on "concentration of solution" in order to procure comparable results.

No Universally Satisfactory Boil-off Formula.

It is impossible to give a boil-off formula which will be satisfactory in all mills, as conditions vary so greatly that usually it is necessary for each mill to work out the most satisfactory method for their particular conditions. Soft water is not essential, but is always recommended. If the water contains only a few grains of hardness, it will then be necessary to vary conditions so the lime soaps are kept in suspension.

In general the oil is removed by emulsifying in a bath containing soap or a sulphonated oil in conjunction with an alkali such as soda ash or tri-sodium phosphate. Other additions to the bath which are also found helpful are pine oil, ammonia, borax, etc. Soap has usually been found to remove the oil more thoroughly than a sulphonated oil; however, it is usually more difficult to rinse the goods free from the soap solution. A soap with a high titer, such as a tallow soap, is more effective for a boil-off than a low titer soap, as an olive oil soap, which breaks down at temperatures around 180 degrees F. Usually soap is not recommended for use with hard water, due to the formation of calcium soaps. These calcium soaps are not troublesome in the boil-off procedure, but usually occur in the first or second rinse. The reason for this is that calcium soaps will remain in suspension in a mild soap solution. Thus in the boil-off, there is sufficient soap present in excess to keep the calcium soaps formed, in suspension.

In general, a good grade of sulphonated oil is recommended for a hard water boil-off as there is less danger of contamination from soap spots.

Time of Treatment.

The time of treatment in the boil-off bath will depend on the length of bath and type of machine. Usually from forty-five minutes to one hour is sufficient, keeping the temperature at the boil during this period.

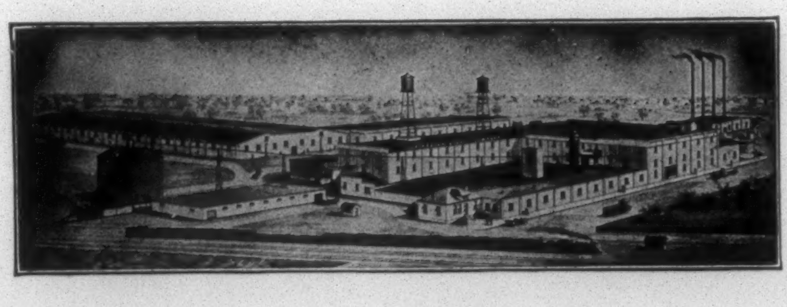
A boil-off formula usually recommended is 6 per cent of a 75 per cent sulphonated castor oil or 6-8 per cent soap, preferably soap chips, and 2 per cent soda ash. These percentages are based on the weight of goods, when the ratio of goods to bath is one pound of goods to two gallons of bath. This gives a concentration of 4-10 of 1 per cent of sulphonated oil in the bath. If the length of bath varies greatly from the ratio of 1 pound of goods to 2 gallons of solution, the formula should be adjusted so the concentration of the oil in the bath is 4-10 of 1 per cent. The soda ash should also be varied in the same proportion.

If it is desired to use ammonia in conjunction with the soap-soda-ash boil-off, usually one per cent will be found to aid materially in the removal of the oil.

The Dyeing Operation Proper.

Let us now turn our attention to the actual dyeing operation. We have probably all read lengthy treatises, which elaborated on cotton dyeing, and closed by mentioning that viscose rayon dyes similar to cotton. This statement is very misleading. True, we use direct dyes for both the natural and the artifi-

VICTOR MILL STARCH – The Weaver's Friend



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cial fibers, but here the similarity ceases. In cotton dyeing, the dyestuffs which dye slowly give the most even results, whereas in dyeing a viscose rayon the dyestuffs which dye most rapidly give the most even results, while the slow dyeing ones are mostly unsuitable and give uneven results. Similarly in dyeing rayon, experience has shown that conditions which feed the dyestuff on the most rapidly, such as high temperatures, give the most even results.

Probably the most important factor in successfully dyeing rayon is the correct choice of dyestuff; the influence this factor has on the evenness of shade cannot be too strongly stressed.

Whittaker devised a method of evaluating dyes, by which means it is possible to tell at a glance if the dyestuff is suitable for rayon. The list of dyestuffs so evaluated by Whittaker, and commonly referred to as Whittaker's Tables, or the Index Numbers, is simply a list of the common dyes with a number after each dyestuff, ranging from 8 to 21½. The dyestuffs with the highest numbers will give the most even results on rayon.

Properties of Most Suitable Dyestuffs.

Experience has shown that the dyestuffs most suitable for rayon possess the following three properties:

1. They dye at a rapid rate.
2. They level when boiled in a soap bath.
3. They require the least Glauber salt for exhaustion.

Whittaker found that those dyestuffs which exhibited the above properties all had one other property in common: they all exerted a low capillary action, and, further, the more suitable the above three tests showed, the lower was the capillary action, of the dyestuff.

In compounding shades it is particularly important to choose dyestuffs of as near the same number as are available; the high number dyestuffs should always be given the preference. The mixing of high and low numbered dyestuffs should be avoided. If it is impossible to obtain a high number dyestuff in a certain color, more even results will be obtained by using all low numbers of as near the same magnitude as possible. This can be exemplified in formulating a shade of Nile Green. Those who are familiar with Whittaker's Table will know that there are no suitable high numbered blues or greens for this shade. Sky Blue 6B or 6BX is generally used which has an index number of only 9. If we formulate this with Chrysophenine, which has an index number of 19, the result will usually be poor. The Chrysophenine will first be exhausted, and the longer dyeing is continued the more blue will the shade become. Similarly, when salt is added, instead of causing a darker shade of green, it will force it over to the blue-green shade, on account of forcing more of the slow exhausting blue on to the fabric than yellow. A more uniform result will be obtained by substituting the Chrysophenine by one of the low numbered yellows.

Classification Must Be Further Broken Down.

It must not be considered that the choice of dyestuffs ends by choosing the high numbered dyes from Whittaker's Tables. This is only the first and general classification of the suitable dyestuffs. It is next necessary to break this classification down still further by segregating those dyes which are suitable for each mill product, and also for the conditions in this mill. For example, the hosiery dyer can use only those dyestuffs which are good union colors with mercerized cotton, while the dyer of underwear tubing may be troubled with longitudinal streaks and cannot use the most rapid exhausting dyes, but will have to choose dyestuffs with lower numbers which exhaust at only moderate rates.

In hosiery dyeing two difficulties present themselves, assuming the dyer is able to match his shade satisfactorily. The first of these is penetration at the heel and toe, and the second is the union between the rayon and mercerized cotton. In order to obtain satisfactory unions, it is necessary to use only those dyestuffs which are good union colors. Some dyestuffs may give good unions with one make of rayon and be unsatisfactory for other makes. The conditions must also be carefully controlled as to the temperature at which dyeing is commenced and the time of salting.

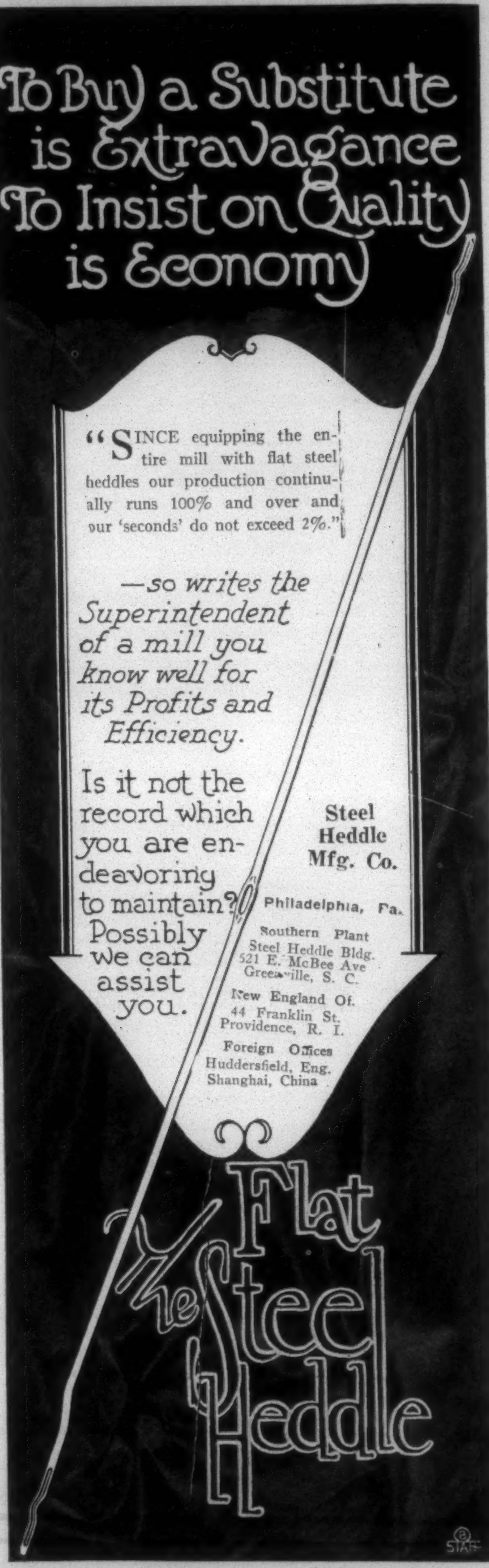
Dyeing Started at Highest Temperature.

Dyeing is usually started at the highest temperature possible. If drum machines are used, dyeing can be started at or near the boil. If paddle machines are used it may not be advisable to start above 160 or 170 degrees F.; temperature is then brought to the boil, and salt added as soon as possible. The interval between adding the dyestuff and salting is dependent upon penetration and is usually from ten to fifteen minutes.

Penetration at the heel and toe is often a troublesome factor. This is usually more pronounced in paddle machines when the goods are bagged. The common practice is to shake the tangles from the bagged goods between the boil-off and dye bath. Care must be exercised in this operation, as the goods are wet and can be degraded very easily. The usual remedy for poor penetration is to allow a longer interval of time before salting, or to commence dyeing at a lower temperature, or a combination of these two variables. It may be found that it is necessary to carry this practice to such extremes that a poor union will result between the rayon and the mercerized cotton. If this is the case, it will probably be necessary to alter the selection of dyestuffs and use slower exhausting colors, or those having lower capillary numbers in Whittaker's Tables, yet colors which give unions with rayon and mercerized cotton.

In some instances where continued difficulty has been experienced with penetration, relief has been obtained by making alterations on the knitting machines, so that more stitches

(Continued on Page 39)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Some Improvement Noted

WHILE conditions in the cotton goods markets are still far from satisfactory, some improvement is becoming evident. We feel that the markets are making some progress and that the outlook now is much better than at the beginning of the summer.

One of the largest selling houses reports that its business in August showed the greatest volume this year. Prices, of course, are still too low. The margin between cotton and goods prices is too small for a reasonable profit, but shows some signs of getting better.

The trade this week is being slowed down by the approach of the cotton crop report to be issued Saturday. Many mill men hope that the report will clarify the cotton situation and bring about much more active trading than has been the case in the past several weeks. Much business has been withheld on account of the uncertainty over the size of the crop and a more definite understanding should find many buyers willing to operate more freely.

Mill men with whom we have talked recently are about evenly divided in their opinion as to whether the crop report will be bullish or bearish, although there is a tendency to lean somewhat more heavily on the bull side. The same difference of opinion seems to prevail among buyers. However, we believe that many of the larger buyers are not willing to risk much more delay before purchasing.

The long period of curtailment that has been in effect almost since January is beginning to be felt in the markets and when business picks up the smaller stocks that the mills are carrying should prove a blessing. This week about 80 per cent of the mills on print cloths and narrow sheetings are standing idle in order to reduce stocks.

The export market has improved to some extent and is much more promising now than for some time past.

The yarn markets have failed to show any material change in recent weeks. The constantly fluctuating price of cotton has made business particularly difficult for the carded yarn spinners. They have, as a whole, we believe, held prices better than in any former prolonged period of depression. Yarn stocks are small, both at the mills and in the hands of consumers and mills should be quick to feel any revival in demand.

The automobile business has been of tremendous benefit to the mills in recent months. Cotton goods constructions used by the automobile trades have sold very freely. Many large buyers are in the market now for large quantities of goods wanted for delivery as far as six months ahead.

The long strike in the fine goods mills in New Bedford is being felt now and fine goods business has shown considerable improvement.

All in all, we think that the outlook at present justifies a good deal more optimism than is generally being expressed by the mill men.

Fine Goods in the South

COMMENTING upon the fine goods situation that has been brought about by the strike in New Bedford and on the view that all of the fine goods mills will go South, Fibre and Fabric says:

"This cannot be, first because the South has neither the help nor equipment to produce New England goods."

It is of course true that the South has not as much fine goods equipment as New England, but the tendency to get into fine goods production has been very clearly marked within the past two years.

As to the help in Southern mills, they have already furnished the answer as to whether they can produce fine goods. Fine goods mills in the South have been able to produce goods that are equally as good as those produced in New Bedford. The records of the mills show this. Southern mill operatives, native born Americans, have proved that they can readily be trained for handling fine goods.

One of the advantages of the Southern mills is that they have a class of employees that is far superior to those in New England, an asset that can't be overlooked in any discussion of textile conditions in the two sections.

We do not believe that New Bedford is going to lose its entire fine goods business. We do not believe that the Southern manufacturers have any desire to see such a condition develop.

We are confident, however, that the South is eventually going to have a fine goods production that will exceed that of New England. If the South does fail to build such a business, it will certainly not be because of the inability of the help.

A Man At Forty

FOR several weeks we have been in our Discussion columns, quite an argument as to the replacement of superintendents and overseers of 40 years or more by younger men. The opening gun was fired by an overseer who was alarmed that so many of the best jobs were being given to younger men, forcing the older men into lesser positions. Since that letter was published, there have been quite a number written upon both sides of the question.

It is our own opinion that the first writer was unduly alarmed over the situation. We know of no wholesale replacement of men who have reached the 40-year mark.

We have been watching superintendents and overseers come and go for many years. We have seen numbers of them lose out whose early records held great promise for them. We have seen others carry out their work successfully long after reaching 40 years. We believe that a check-up would show that more large jobs are being handled by men over 40 than by younger men.

We never knew any man who was kicked out of a job just because he was 40 years old. With few exceptions, we know of no superintendent or overseer who failed except through his own shortcomings. Some men have, of course, had to step aside in favor of the young men with a "pull," a regrettable fact that is true of all business.

The folks who have made a close study of the statistics showing the accomplishments of men, tell us that 40 years is the "danger point." For the average man, 40 years will show whether he is to succeed or not.

The average man at 40 has to fight a tendency to slow down. He is likely to lose some of the ambition he formerly had, to let himself go stale.

In the mill, we think the most important thing for any man, whether above or below 40, is to keep up with changing conditions in the industry. He must keep his viewpoint fresh, his mind receptive to all new ideas and improvements. Otherwise he will get himself into that well known attitude, "The good old days were best." That's dangerous.

A man at 40 is certainly not old. If he will keep himself thoroughly posted and constantly on the job, he is not going to lose out because of his years.

H. H. Iller

WHILE we rejoice to see H. H. Iller move into a better position, we regret very much that his is severing his active connection with the mills. As chairman of the Master Mechanics' Division of the Southern Textile Association, Mr. Iller has rendered valuable service to the Association and to the industry as a whole.

Mr. Iller is the type of man that the mills need and we are glad that his new duties will keep him in contact with the textile industry.

Rayon Production in the South

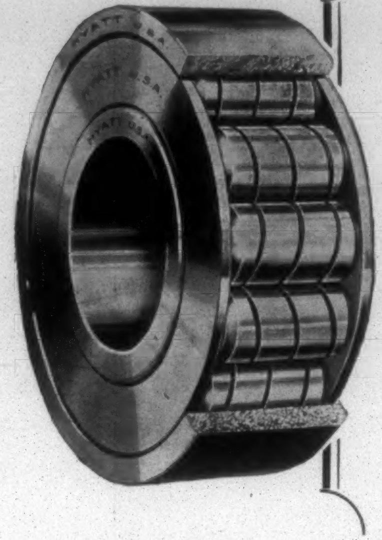
RECENT developments in rayon production indicate that the industry is this country is going to be centered in the South. In fact, there are many indications that the South is to be the rayon producing center of the world.

Two large new plants have recently been put under way in Virginia and that is a strong likelihood that a third new plant is to be built in that State.

Tennessee, with the large DuPont plant at Old Hickory near Nashville, and the two companies operating at Elizabethton, already has a large rayon industry. A second unit of the American-Bemberg Corporation, to cost $3,500,000, is to be built at Elizabethton next year.

The American Chatillon Company, recently began construction of a rayon plant at Rome, Ga., and the plant being erected at Burlington, N. C., by the Johnson interests, of Chicago, is rapidly nearing completion.

The decision of the rayon companies to locate in the South was of course, due to the favorable conditions that they found in this section. The coming of these plants means another step in the diversification of the Southern textile industry. In addition, their advent is an important factor in the general industrial development of the Southern States.



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Hyatt Bearings have been accepted not only as a distinct aid to quality and efficiency in making better cloth, but also because they reduce power, lubrication and maintenance expense, and play an important part in maintaining production schedules.

A growing demand for Hyattized looms and other textile machinery has followed recognition of their durability.

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MANY a spinner and carder will smile as this picture recalls to his mind how he got rid of a lot of bobbins that didn't measure up—then he ordered some more.

Operators can't produce good work on bobbins that run out of true, that are off-size, poorly finished, or otherwise defective, and their natural action when they strike such a bobbin is to heave it in the trash can.

They don't have to destroy many before your cost per usuable bobbin has risen far above the price you would have to pay in the first place to get bobbins of guaranteed quality. From this angle alone, it pays to buy good bobbins, not to mention the waste in material and time you avoid.

First cost by no means tells the story. In the long run it always costs less to buy U S guaranteed bobbins. Often the first cost is no higher.

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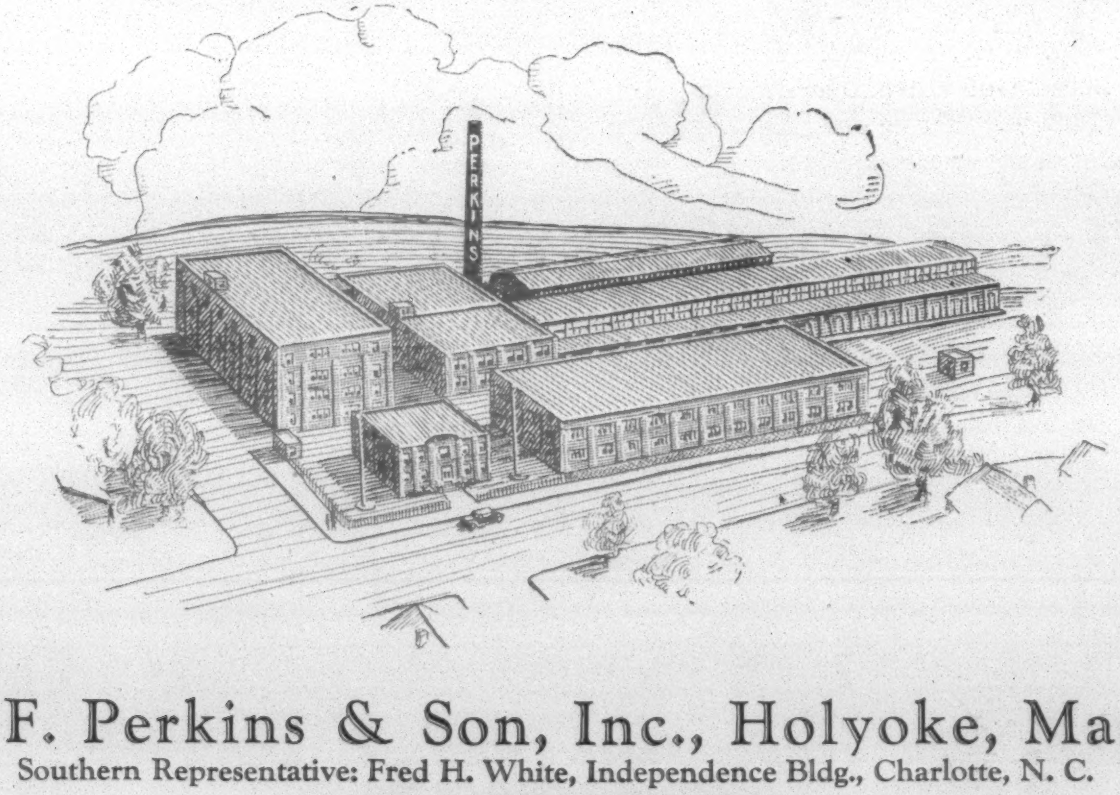

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Personal News

J. T. Hedrick, of Lexington, N. C., is to be president of the Neely-Travora Mills, Inc., York, S. C.

Geo. W. Chapman, of Opp, Ala., is now fixing looms at the Pepperell Manufacturing Company, Opelika, Ala.

L. S. Creswell, from Manchester, Ga. has become second hand in weaving at the Pepperell Manufacturing Company, Opelika, Ala.

L. N. Peyton formerly of Newnan, Ga., is overhauling looms at the Pepperell Manufacturing Company, Opelika, Ala.

T. J. Reynolds has resigned as second hand in weaving at the Pepperell Manufacturing Company, Opelika, Ala.

H. G. Park, of Columbus, Ga., has become overseer slashing at the Pepperell Manufacturing Company, Opelika, Ala.

I. P. Fortner has been promoted from loom fixer to second hand in weaving at the Glenwood Mills, Easley, S. C.

Charles Mount, formerly with the Brookside Mills, Knoxville, Tenn., is overhauling looms at the Pepperell Manufacturing Company, Opelika, Ala.

W. Linday Wilson, Southern representative of the General Supply Co., Danielson, Conn., has resigned. The office will continue to be maintained in Greenville.

Charles Thompson, formerly overseer of weaving at the Brookford Mills, Brookford, N. C., now has a position with the Brookford Mills No. 2.

J. R. Edens has been promoted from second hand to overseer weaving at the Glenwood Mills, Easley, S. C., succeeding P. T. Sanders, deceased.

I. K. Edwards has resigned as overseer carding and spinning at the Clyde Mills, No. 1, Newton, N. C., and accepted a similar position at the Morrillton Cotton Mills, Morrillton, Ark.

A. L. Haney has resigned as overseer weaving at the Jennings Cotton Mills, Lumberton, N. C., and returned to his former position as overseer weaving and designer at the Brookford Mills, Hickory, N. C.

A. R. Meeks has resigned his psoition with the Russell Manufacturing Company, Alexander City, Ala., to become superintendent of the Clanton plant of the Alabama Mills Company, Clanton, Ala.

J. R. Johnson, who has been general superintendent of the Neely and Travora Mills, York, S. C., has been elected treasurer and manager of the Neely-Travora Mills, Inc., the new company that has taken over these mills.

S. L. Rice has been promoted to overseer of weaving at the Blair Mills, Belton, S. C.

Frank Little has been promoted from overseer weaving to superintendent of the Blair Mills, Belton, S. C.

Amos C. Johnstone, formerly superintendent of the No. 1 Division of the Loray plant, Manville-Jenckes Company, Gastonia, N. C., will represent the General Supply Co., Danielson, Conn., in the Carolinas.

H. H. Iller.

H. H. Iller has resigned as master mechanic and chief engineer at the Newberry Cotton Mills, Newberry, S. C., to become associated with the Motor Rebuilding Company, Durham, N. C.

Mr. Iller has been chairman of the Master Mechanics Division of the Southern Textile Association since the Division was organized. He has tendered his resignation as chairman o fthe Division, since he will be no longer directly connected with the tetile industry.

G. T. King Heads Master Mechanics

G. T. King, plant engineer of the Lancaster Cotton Mills, Lancaster, S. C., has been appointed chairman of the Master Mechanics Division of the Southern Textile Association. Mr. King has been assistant chairman of the Division since it was organized two years ago and is fully qualified to fill the position of chairman. He succeeds H. H. Iller, whose resignation is announced in these columns.

Spinners' Meeting

The Spinners' Division of the Southern Textile Association is to meet Friday of this week at Lake Lure, N. C. A large attendance is expected.

The meeting will differ somewhat from the previous meetings in that a general subject has been chosen for the discussion. The proper care of spinning machinery is to be the principal subject discussed and it is expected that a great deal of worth while information will be developed.

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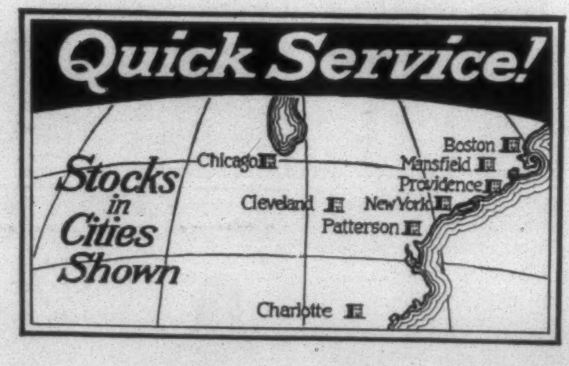

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MILL NEWS ITEMS OF INTEREST

Grottoes, Va.—The Grottoes Silk Mills have been incorporated by Abel K. Baker and others, of New York.

Saxapahaw, N. C.—The Sellers Manufacturing Company has purchased 2,000 additional spindles from the Whitin Machine Works.

Asheville, N. C. — The Reliance Underwear Company, which was recenty organized here as noted, has leased a building and is installing machinery for making rayon underwear.

Wellford, S. C.—The Jackson Mills No. 2 have let contract for a new picker building to J. C. Cunningham, of Greer. The building will be 100x 75 feet, three stories.

Royston, Ga.—The Royston Spinning Mill Company, expects to let contract this week for a mill building to cost about $100,000. The building will be 1 story and basement, 80x312 feet. Park A. Dallis, Atlanta, is the engineer.

Grham, N. C.—The Esther Hosiery Mills have been incorporated here by J. T. Black and M. R. Neese. It is understood the company will establish a hosiery plant, including dyeing and finishing equipment.

Hickory, N. C.—The Real Hosiery Company has been incorporated by H. J. Holbrook and H. G. Stephens. It is understood that the company is an incorporation of the Real-Knitting Mills, which have been owned by C. S. Grove.

Maiden, N. C.—The Carolina Cotton Mills, Maiden, N. C., which have been in receivership for some time, will be offered at public sale on September 14 by J. A. Moretz, receiver.

Anniston, Ala.—The building to be occupied by Piling and Madley is almost completed and the removal of hosiery machinery from the Philadelphia plant will start within a short time.

Sparta, Tenn.—Sparta Silk Mills, R. L. Mills, J. R. Tubb, Jr., will establish silk mill in building to be erected by Sparta Realty Co.; Robert & Co., Atlanta, Ga., engineers; building will be 100x350 feet; install machinery from Welwood Silk Mills, Inc., 2 Park Ave., New York.

York, S. C.—At a meeting of the stockholders of the Neely-Travora Mills, Inc., the following officers were elected: President, J. T. Hedrick, Lexington, N. C.; vice-president, J. T. Hedrick, Jr., Lexington, N. C., treasurer and general manager, J. E. Johnson, York.

The company was recently formed to purchase the Neely and Travora Cotton Mills.

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Sherman, Texas.—The Pool Manufacturing Company is erecting a one-story building 200x300 feet to house all their equipment.

Greenville, S. C.—Buildings for the new Piedmont Print Works plant at Taylors are now 99 per cent completed and will likely be finished by September 1, it was learned from Potter & Shackleford, contractors.

Work of installing machinery has begun, but just how long this will require was not indicated.

Cateechee, S. C. — Approximately 9,000 new spindles are being installed in the Norris Cotton Mills. The spindles replace only equipment which is being removed, and therefore the capacity of the mill will not be enlarged. Whitin spindles are being used to replace those now in use. Approximately 60 days will be required to finish the installation of the new equipment, it was stated.

Weldon, N. C.—An involuntary petion in bankruptcy against the Audrey Spinning Mills, Inc., was filed in United States District Court at Raleigh by creditors and stockholders of the mill.

Petitioning stockholders and creditors were L. R. Gilbert and A. L. Cochrane, of Weldon; W. J Aldridge, R. D. Jackson and the Mandeville Mills, of Carrollton, Ga.

Columbus, Ga.—Plans have been prepared by Lockwood, Greene & Co., Inc., Charlotte, and contract will soon be awarded for the erection of new mill units here for the Archer Hosiery Mills. It is planned to erect a two-story and basement main building, 128 by 72 feet, with stairs, elevators, towers and toilets; one-story office building, 36 by 42 feet; one-story dye house, 27 by 45 feet; one-story boarding house, 45 by 63 feet, and a one-story boiler house, 18 by 36 feet.

Anderson, S. C.—Construction of the addition to the Appleton Mills will be completed around November 1, it was announced here, the walls and roof having been finished and nothing remaining to be done but the construction of the interior. Doubling of the plant was not dependent upon the unit now under construction, however, as the building being erected will be used for warehouse purposes, while the former warehouse was used for the installation of 30,000 additional spindles, the number of employees also being virtually doubled recently when the extra spindles were added.

The Appleton village was also doubled to care for the large number of employees who were added when the spindles were recently installed. Potter & Shackleford, of Greenville, are the contractors for the unit of the building now under construction.

Southern Textile Exposition

Greenville, S. C. — The Southern Textile Exposition, which opens in Textile Hall here on October 15th for one week, will be the most interesting and attractive of its kind ever held. The number of exhibitors has now grown to one hundred and eighty, and the variety of machinery in operation will include everything from the opening of the bale to the dyeing and finishing of the fabric.

Some of the exhibiors promise startling innovations in a field which is already filled with thousands of marvelous inventions and devices.

It is a far cry from the present cotton factory back to the hand looms of the Egyptians in the days of the Pharaohs. W. G. Sirrine, president of Textile Hall, has in the drawer of his desk a small pieces of cloth woven somewhere along the banks of the Nile about four thousand years ago. In those days the cotton was picked, carded, spun, reeled and woven by hand.

Within the memory of some of the older inhabitants of Greenville county almost the same method was pursued before the Civil War. Mr. Sirrine has collected some of the spinning wheels and looms and has arranged to show this hand carding and weaving at the Exposition. This interesting feature will probably be shown on the mezzanine flor. In other parts of the building will be seen the very latest things in every phase of the machinery biulders art, driven by modern electric motors.

Rogers Fibre Co. To Have Spartanburg Plant.

Spartanburg, S. C.—It was announced here that the Rogers Fiber Company, of Boston, Mass., and Kennebunk, Me., will establish a Southern factory in Spartanburg for the manufacture of leatheroid mill receptacles.

Representatives of the Rogers Company have leased the Star Hosiery Company plant on Arch street and operation will begin the latter part of the month. Between 50 and 75 skilled workmen will be employed and machinery will be shipped from Kennebunk.

The company will manufacture leatheroid fiber roving cans, doffing boxes, trucks and other articles, being one of the largest concerns of the kind in the United States.

Cotton Marketing Groups Discuss Cooperative Selling

Washington.—A meeting of representatives of sixteen of the leading co-operative cotton marketing associations throughout the South and Southwest, representing approximately 118,000 cotton growers, is to be held this week at Memphis, Tenn., with officials of the United States Department of Agriculture for a two-day conference in connection with developing the department's program of research, service and educational work in the co-operative marketing of cotton.

This conference was called by Secretary Jardine under the provisions of the Co-operative Marketing Act, which provides for the holding of conferences with representatives of various co-operative associations for the purpose of discussing specific problems pertaining to the development and operation of agricultural co-operatives.

Chris L. Christensen, head of the division of co-operative marketing, stated that the aim of the conference is two-fold: (1) To afford an opportunity for the leaders in the co-operative movement to get together in an informal way in order to review in detail the progress of co-operative marketing of cotton to date and consider further objectives and policies, and (2) to assist the department in expanding and strengthening its program of research, service and educational work relative to co-operative marketing of cotton.

The conference will review in detail the progress and accomplishments of co-operative cotton marketing; the economic services that cotton co-operatives can advantageously perform in the interest of the growers will be discussed; and problems connected with production credit, the ownership and operation of gins co-operatively, and other problems will be studied. Considerable attention will also be given to price and sales policies and the membership problems of cotton co-operatives.

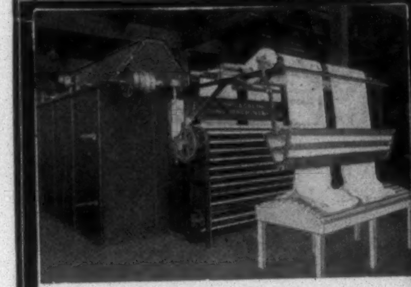
Cotton Firms Merge

Memphis, Tenn.—One of the largest cotton firm mergers of recent years became effective with the taking over of Farnsworth Evans Company, of Memphis, by McFadden Brothers, of Philadelphia. The merger will be a partnership between George and Barclay McFadden, of Philadelphia, and W. L. Oates, now president of the Farnsworth Evans Company. The new firm will be known as McFadden Brothers and Oates.

The Farnsworth Evans Company was capitalized at $250,000 and has an estimated worth of $750,000. The McFadden firm is estimated to be worth $20,000,000. The Farnsworth Evans firm owns control of the Tri-State Compress Company, in Hollywood, a suburb of Memphis.

The Farnsworth Evans Company was established here in 1863 by Farnsworth and Price. In 1888 the company was succeeded by C. F. Farnsworth & Co., which continued until November, 1898, when J. A. Evans sold control to George H. McFadden & Bros., Philadelphia, and it has since operated as a subsidiary of the Philadelphia corporation.

Mr. Oates will remain as head of the new firm. The old charter will not be surrendered until all assets are liquidated, although all business will be transacted under the new firm name. The firm does a large cotton business.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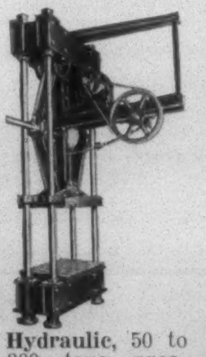

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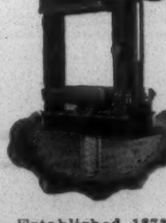

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Seeing the Cotton Fields

(Continued from Page 19)

I would rate the cotton fields of Texas as seen by me at about sixty per cent of the present average in North Carolina and South Carolina and it would surprise me if Texas produces 5,000,000 bales as is now predicted by some.

The Dallas News, an unusually reliable authority, is publishing some very bullish reports and I noticed several reports similar to the following:

> Tyler, Texas, Aug. 31.—Fast deterioration and shedding from continued excessive heat, resulting in some places in premature opening, is estimated to have cut the season's yield of cotton 10,000 bales in the last three weeks. Up to that time there was promise of a normal yield of 35,000 to 40,000 bales, but it is barely possible now that the county will make 30,000 bales.

From my observations and from expressions of men with whom I talked, it is my conclusion that the cotton crop of Texas and Oklahoma has been overestimated.

The remainder of my trip was through areas in which there is no cotton grown.

The Take-Up of Silk Warps in Weaving.

(Continued from Page 23)

in the gray state by a converter, such an increase in length to him is a real gain. Hence, any manufacturer who sells his goods in the gray, or unfinished state, in order to know their real cost, should have, for each class of goods, and on many representative pieces, a careful series of full one-inch counts made of the filling threads, say, at twenty places throughout the length. In this way, the filling threads per inch actually in the cloth in its measured state can be determined, and, by comparison with the number of picks actually woven into the cloth, the shrinkage of the goods in the gray state can be determined, and the cost of the gray goods calculated accordingly.

The above statement applies in the figuring of the take-up of the warp in weaving. Suppose that the take-up in weaving of a cotton back satin was actually 5 per cent, and supposing that 100 yards of the goods shortened to 97 yards before measuring, it is obvious that, figuring the way that the manufacturers usually do, the take-up in weaving would be regarded as 8 per cent.

American Bemberg Corp. Plans New Unit

Johnson City, Tenn.—Construction of additional units at the plant of the American Bemberg Corporation in Happy Valley, near this city, as soon as the second unit is fully manned, and considerably sooner than had been anticipated, together with the introduction of improvements which will increase the production from 40 to 50 per cent, have been announced by Dr. Arthur Mothwurff, president of the corporaton.

This is interpreted to mean that the construction of a third unit, costing about $3,500,000, will begin shortly after the first of the coming year. The second unit has recently been completed and is being manned as rapidly as employees can be secured and trained. It is considered that it will be about midwinter before the second unit will be fully manned, as approximately 2,000 employees are required for each unit. About that number are working in the first unit, which is running full capacity.

Reports Contradicted.

Dr. Mothwurff's statement is as follows: "Report has been circulated by the trade papers to the effect that the American Bemberg Corporation did not contemplate expansion over its present capacity of 5,000,000 pounds per year. This report has been misrepresented as coming from official sources. No such statement could have been authorized, as it is at variance with facts.

"Bemberg fabrics have become rapidly popular with the American market. Construction of the second unit could therefore have been started at an earlier date than was originally scheduled. Meanwhile, we have succeeded in effecting important improvements in our manufacturing process and are busy in extending them to the equipment of the two units. These will result in a 40 to 50 per cent increase over the announced capacity of our present facilities.

Sees Need of Expansion.

"Market conditions do not allow us any slowing down in our expansion program, and indications are that additional construction will be recommended by the time our present program has been accomplished."

Details of the improved manufacturing processes were not given out, but such a measure, increasing the production by half, is considered an industrial factor of the utmost importance and as far reaching as the actual construction of a third unit.

Further confirmation of the expansion program under way is found in the recent conferences between Bemberg officials and members of the chambers of commerce of Johnson City and Elizabethton with a view to securing additional laborers. Industrial and labor surveys have just been completed here to ascertain the amount of labor available. President Sam R. Sells, of the Chamber of Commerce, has just asked that at least 1,000 additional homes be constructed in Johnson City and in Happy Valley between Johnson City and Elizabethton for the use of additional labor which will be needed in the next few months.

10,000 Pounds Daily.

Present production of the two units was originally figured at 7,000 pounds per unit per day. With the improved processes each unit will be able to produce 10,000 pounds per day. With the full five units as planned, in operation within the next three years, an annual production of about 18,000,000 pounds is forecast.

Dr. Mothwurff's announcement referred to Bemberg only, but is known that the plans for the construction of additional units at the American Glanzstoff plant, which

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adjoins Bemberg, are going on as scheduled. One unit is complete and is now being manned. Four other units costing $4,000,000 each are planned.

Paris Styles Include Rayon

"Paris Gives Rayon Its Place in the 'Mode,'" says the current issue of Vogue, thus giving further assurance of the social prestige of that fiber. In an article which accompanies a series of eight sketches of rayon models from the houses of Lelong, Molyneaux, Louise-boulanger and Patou, Vogue goes on to say that while the introduction of rayon into fabrics is not new, it is distinctly modern, with each season showing a wider and better use of it in fabrics. It, according to Vogue, is now sponsored by the leading fabric makers, the foremost creators and the smart women of the world.

To it we owe transparent velvet, for it "never could have come into being without it, nor could the luminous quality that it lends, not only to the fabric, but to the color of the fabric." To brown, usually considered a "mat" color it lends luminosity. Many satins are so brilliantly radiant only because of rayon and to many novelty woolen fabrics it gives a pearly, frosted or stippled appearance.

The sketches accompanying the article include a formal ensemble from Lucien Lelong combining Bianchini's rayon satin Lunasol in black and white. The top of the dress is white satin and there is a soft kerchief collar of breitschwantz on the three-quarters length coat. Lelong also cuts and drapes a beautiful soft rose shade of rayon velvet from Ducharme into an evening gown of diagonal cut and unusual circular flounce nad panel effect.

A wool and rayon mixture from Rodier has been used by Molyneaux in a winter ensemble. The dress has a trim jabot and shaped beaver collar and cuffs add chic to the beautifully tailored coat. From the Molyneaux collection also comes a very becoming and distinctive evening dress of black rayon velvet with straight decolletage, snug hipline and wrapped skirt with lapping panels.

A day-time dress of reddish-mauve with tiered flounces and swathed hips from Louiseboulanger is given added charm and sheen by a delicate pattern of rayon threads woven through the wool background. From this same house is also pictured an evening gown developed from a pinkish-brown shade of rayon transparent velvet, interesting details of which include bodice decorations and bindings of gold cloth, shirred skirt and accented hips.

Patou uses his favorite egg-shell color for a distinctive evening gown of rayon satin Lunasol with shirring at yoke and hip, and uneven, floating panels. Another gown from Patou featured by Vogue is an afternoon frock made from Ducharme's black rayon velvet, the uneven apron panel and intricate diagonal cut of the bodice being accentuated by the luminous quality of the material.

August Volume is Greatest of Year

"Our total sales last week just about equal full production, making August the best month in volume this year," a leading commission house reports.

"While gray goods sales show some decline for the week, total colored goods sales are about 70 per cent in excess of full production. We have had active business in practically all divisions of colored goods, including ginghams, chambrays, flannels, denims and wash goods and a large volume on export fabrics. There has been considerable improvement in the sale of towels, and a fair volume of sales has come through daily on sheets polliw cases. The general tone of the market is better, and, while many prices are still too low, we believe that next month we will see some improvement in the margin between cotton and goods. We have been impresed this week by the decidedly better feeling among convrters, and we hope that finished goods sales will continue to increase.

"The large printers report a satisfactory business for the past few weeks with the outlook good. In fact, they predict an unusually large volume for fall. They are now offering a complete line for delivery up to January 1, and their lines comprise largely the wide standard print cloth constructions from 60x48 to 80x80. This will undoubtedly be reflected in the larger purchases of print cloths in the next few weeks.

"There has been very little activity to report of late from the bag trade, which bought freely of their constructions in June and since then has placed comparatively little business. As was the case last year, this may be attributed to some extent to the condition of the wheat market. Purchases are being delayed in an effort to reduce prices, which, of course, results in the deferred placing of bag requirements. Consumption of osnaburgs as a substitute for burlap in bran, feed and meal bags will show some falling off for the present year, as prices favor burlap. There also seems to be a steady increase in the use of paper bags by the cement manufacturers."

Cotton Exports Decline To 70.486 Bales in Week

Washington.—Cotton exports for the week ended August 31, amounted to 70,486 bales, compared with 156,575 bales for the corresponding week last season, according to statitics compiled by the Department of Agriculture. Exports from August 1 to August 31, 281,751 bales, against 407,917 for the same period a year ago. Figures include exports to Canada to August 31.

STRIPPER X **ORTHOCEN**

To the Superintendent:—

How often has your dyer blamed poor dyeing on those things beyond his control in the dyehouse?

In most cases he is right, but this condition can practically be eliminated, and the result will be a lowering of redyes, and an increase in production, by having us ship you a barrel of ORTHOCEN.

Sole Manufacturers and Distributors of ORTHOCEN

American Aniline & Extract Company

(Established 1898—Reorganized 1922)

141 North Front Street
Philadelphia
U. S. A.

DYESTUFFS of QUALITY

P. S.—Ask your neighboring mill what they think of ORTHOCEN

CHEMICALS of ORIGINALITY

Faulty Selvedges in Cotton Cloths

(Continued from Page 18)

matting selvedge, denting these ends open enough to allow sufficient room for the weft between.

Split Goods

One more source of trouble is with split goods, especially in cloths made with fine yarns. Recently we had a case where the split (or crossing) ends had cut the weft. The maker of the cloth said this was the finisher's fault, but an examination of the grey goods showed the weft to be cut before they left the mill. On testing the cloth it was found to be a warp satin 160 x 84 inch, 60's twist and 100's weft. The selvedges were plain weave, and the crossing ends were 4/60's. As these ends, when crossing took pace, laid one above the others, the thickness at this point was equal to two ends of 15's against that of one end of 60's in the body of the cloth. An examination at the loom showed that the cutting took place when the cloth was rolled on the cloth roller, by the pressure between it and the sand roller, and also the fact that the cloth being thicker was wound tighter at this point. Further, in splits the weft may be cut, not by the crossing ends being of coarse yarns, and the weft being cut by pressure, but due to the crossing ends being woven too tight, when the pulling action due to this causes them to cut the fine weft playing between them like a pair of scissors. Tight selvedges are very prevalent in the popular limbric cloth, a plain weave, low in reed, high in the pick, with fine warp and coarse weft, as in the sample shown, which is 72 x 108, 72's warp 30's weft and made by one of the best makers in the trade.

Where goods are made with artificial silk weft, careful attention to the selvedges is very important, since if coarse two-fold yarns are used and packed too close together is certain even if the weft is not cut in the loom. It is advisabe also not to dent with three ends in a dent with a plain weave, as the crossing between these three ends is apt to cut the artificial silk weft between them.

PRACTICAL DISCUSSIONS.

(Continued from Page 20)

and give orders what to get done. We have to get in behind that job and see to it that it is done, and help put it through. The other fellow under us is not going to do much pushing if we do not first get it started and then keep after it continuously. The forty-year-olds that are out of a job and can not get the kind they want, have no one to blame but themselves. They have had their chance and if they have not made good, give the man a chance who most deserves it, which is most likely to be a younger man. There has always been, and always will be, a demand for a good man in most any line of work, and when you show your superintendent that you deserve a better job, don't think one time you won't get it. We all know of places that are not being filled efficiently, and especially by overseers, but that is the best the superintendent can do, and if he knows a man that he is confident can beat the fellow he has, he will certainly try to get him. I am tired of hearing some "old grouch" say they would not give me a chance. When any man proves himself worthy his chance is bound to come. The trouble with most of us is we just hate to see our old friends and acquaintances get ahead of us, and when they do step out from us a little we begin to knock them and try to get them back down to our level. Now, Mr. Forty-year-old, if some man twenty-five gets the lead on you, put your shoulder to the wheel and push, and if you deserve it your time will come.

A man that is forty years old and has not gotten anywhere, need not expect to get far. If there is much to him somebody is sure to see it before he is forty years old. Don't ever say you didn't have a chance, because we all have hundreds of chances we don't make use of. The thing to do is keep yourself up in the front ranks where you can see your chance when it does come; and remember when you get back in the bushes and growl and knock the fellow above you, you are in your own light. We all help ourselves by helping the man above us. Here is a good slogan to forever keep in mind: "Ninety-nine per cent of promotion consists of Motion."

Helper.

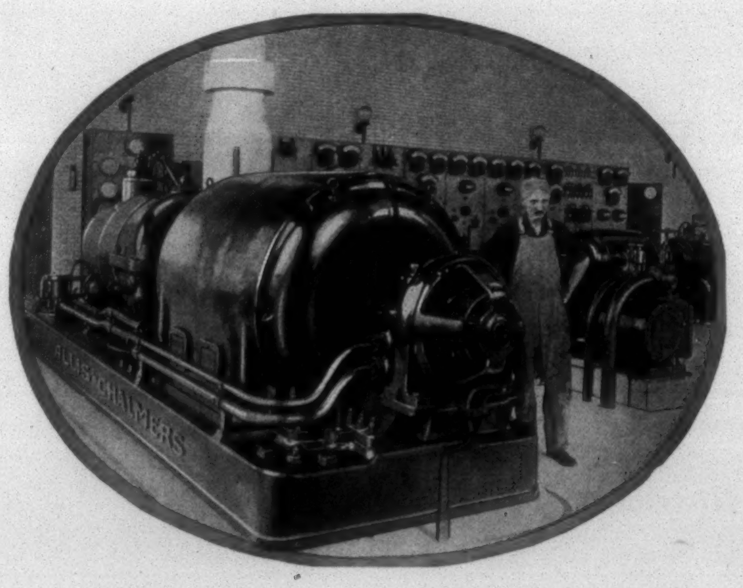
Newspaper Items On Textiles 161 Years Ago

(Continued from Page 22)

every ell of linen cloth called Drilling, which shall be imported into Great Britain, 6c. And after those rates for any greater or less quantity of such goods respectively, over and above all other duties imposed thereon by any former Act of Parliament; but nothing in this Act is to extend to any linen cloth, the produce and manufacture of the East Indies; or to any damask or diaper tabling, napkinning or towelling, or to any cambrics or lawns; or to any Dutch barras or Hessens canvas, which may be imported into this kingdom."

The terrible living conditions in the textile manufacturing sections of England at that date are illustrated in the following letter, published in the issue of June 13, 1767:

"On this sad occasion I think it my duty, by means of your paper, to inform the public, that in this place and the villages around it, also Bradford and Huddersfield, there has prevailed for a year past, and still rages, a disease, which has swept away great numbers of our manufacturers. The physicians are unanimous in opinion, that this disorder is chiefly owing to the bad diet of the poor, and their inability to keep themselves clean. To my



Steam Turbines for Industrial Plants

Allis - Chalmers Turbo - Generator, 2300 volts, 314 Amp., 3-phase, 60-cycle, 3600 R. P. M. in a nationally known industrial plant in Detroit, is but one of the many successful industrial installations.

Allis-Chalmers Steam Turbine and Alternator units are built in sizes ranging from 200 kw. up.

PRODUCTS

Electrical Machinery
Steam Turbines
Steam Engines
Condensers
Hydraulic Turbines
Pumping Engines
Centrifugal Pumps
Gas Engines
Oil Engines
Mining Machinery
Metallurgical Machinery
Crusher and Cement Machinery
Flour Mill Machinery
Saw Mill Machinery
Air Compressors
Air Brakes
Steam and Electric Hoists
Farm Tractors
Power Transmission Machinery
Perforated Metal
Timber Preserving Machinery

ALLIS-CHALMERS
Manufacturing Company
Milwaukee, Wis., U. S. A.

certain knowledge they now eat meal ground from horse beans, and all they can earn will scarce buy them enough of this unwholesome food; and they have no money left for clothes. I see them daily without shirts, and without linen or even a blanket for their beds; their clothes worn out and the few rags remaining are the only covering both day and night.

"In this deplorable situation what can they expect but infection, diseases and death?

"I am told that the same distemper ranges about Leeds, and also among the manufacturers about Blackburn and Rochdale in Lancashire; it were to be wished that the numbers buried of it were collected from the Registers, and laid before the public. It might perhaps move to compassion the hard-hearted, and help to convince all land-lords that uniting small farms will in the end prove injurious to themselves. Indeed for the present, perhaps the Gentleman-engrosser of ten farms may afford to pay more rent for them than ten farmers, but can he with his slaves till the ground as well and produce as much provisions of all kinds as the ten Farmers going to plow with their own children? Or when this monopolizing of farms shall have obtained, so that nothing but slaves till the ground, and beggars chiefly shall eat the produce of it, what will then become of the Landlords advanced rent? Will not they soon see their great farms become desolate forests, with this shocking reflection, that they have in the greatest degree contributed to the ruin of the nation?

"An Overseer of the Poor.
"Halifax, 4 June."

Another item from Charleston, S. C., is published in the paper of June 25, 1767, giving news of the introduction of silk manufacture into that colony:

"Charles Town, May 3.—The introduction of the silk manufacture in this province bears a promising aspect; we hear there are great quantities of silk worms raised in almost every family in Purrysburg parish, and some by the French of Hillsborough, and the English and Germans near Long-Canes, and that several gentlemen and ladies near Charles Town will make the private amusement of raising silk-worms tend to the public benefit, by shewing how easily the knowledge thereof is to be acquired, and what small labour is necessary in the management of them. Mr. John Lewis Gilbert, a native of France, who is employed by the gentleman concerned on behalf of the public, in the encouragement of this manufacture, to wind, and teach the winding of silk, has now a considerable number of silk-worms in the old School House.

"Workmen are now employed in building an oven for curing the cocoons, erecting four machines and all other necessaries for winding silk, with all expedition, in rooms adjoining Mr. Gilbert's, in order that the filature may be set to work as soon as the cocoons are fit, which may be in about three weeks."

The final note of interest is the letter of a gentleman traveling through the French textile manufacturing districts, giving news of the conditions in their industry. It was printed in the issue of August 15, 1767, and is given herewith:

"In passing through several of the provinces of France, I was minute in my enquiries into the state of their fabrics; and many enquiries brought me acquainted with several circumstances of which I had then but little notion. The English manufacturers have an opinion that their men are so much more able and dexterous, that they can undersell the French, quality of the fabric taken into account; but if they had made the examination which I have, they would know that the contrary was the fact. The Government and manners of France tend strongly to oppress the lower classes, who are contented with very ordinary fare, and get not often a belly-full of that, yet they work hard or starve; barley, rye, or buckwheat bread, with water, or a wine worse than water, is their food; thus they can work for wages lower than anything we know of. A spinner, by an employment which in England would yield 10c or 12c a day, does not earn 2c at Carcassone. And a weaver at Canterbury who would get from $1.50 to $2.50 a week, will, at Lyons, have not above 50c to 75c. In fabrics where the product of the labour is a great proportion of the whole value, this cheapness must have a prodigous effect, and is not to be rivalled by a country where the extreme dearness of provisions makes so much higher wages necessary.

"There are manufactures to be found of some sort or other all over France, and the surplus of their population, is the usual fund for recruiting the army, agriculture not yielding nearly an equal supply. Besides a prodigous exportation, the French supply their own consumption with almost all fabrics; hardware from England is their greatest import, but that will not last long, for there have been lately established, by means of workmen from Birmingham, some factories that are likely to answer well."

We are prone to complain of conditions in the textile industry today, but it is evident from the letter of the Overseer of the Poor, of Halifax, and also from this letter written by this visitor to France that competition was exceptionally keen, wages cut to the limit, but the cost of living high. If the conditions were as bad as described in the English textile industry, where "high" wages were paid, the state in the French textile centers must have been beyond the powers of imagination.

Pepperell Arranging Machinery Transfer.

Lowell, Mass. — Superintendent Carter, of the Pepperell Manufacturing Company's mill at Opelika, Ala., and Superintendent Marshall, of the company's Lindale, Ga., plant, have been in this city looking over machinery which will be suitable to the class of goods manufactured in the Southern units.

NATIONAL VAT DYES

Carbanthrene Black B
Double Paste

Carbanthrene Blue GCD
Double Paste

Carbanthrene Blue BCS
Double Paste

Carbanthrene Dark Blue DR
Paste

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Paste

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National Aniline & Chemical Co., Inc.
40 Rector Street, New York, N.Y.

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NATIONAL DYES

You Needn't Wait
5 Years
Or Even Until Next Year

to realize on the savings from an installation of the
"U. G." Automatic Belt Contactor
for short center belt drives. The savings start immediately. Here are a few of the advantages:

1. SAVES BELTING, because the amount required may be much less than for an open drive and eliminates all belt slippage.
2. SAVES FLOOR SPACE by permitting the setting of the motor pulley closer to the driven pulley.
3. SAVES BEARINGS by reducing belt tension therefore bearing strain and bearing friction.
4. SAVES MOTOR COSTS by permitting the use of high speed low cost motors.
5. SAVES POWER by reducing bearing strains and belt tensions and by increasing arc of contact.

T. B. Wood Sons Co.
Chambersburg, Pa.

NEW ENGLAND BRANCH: **Cambridge, Mass.**
SOUTHERN BRANCH: **Greenville, S.C.**

Makers of Shafting, Hangers, Collars, Pulleys, Friction Clutches, Ball Bearings, Flexible Couplings, Rope Sheaves and Pillow Blocks.

DRIVE RIGHT
POWER TRANSMISSION ASSOCIATION

Index To Advertisers

Where a — appears opposite a name it indicates that the advertisement does not appear in this issue.

Page
—A—
Abbott Machine Co. —
Abington Machinery Works 21
Akron Belting Co. 47
Allis-Chalmers Mfg. Co. 32
American Aniline & Extract Co. 31
American Bobbin Co. —
American Casablancas Corp. —
American Glanzstoff Corp. —
American Moistening Co. —
American Yarn & Processing Co. —
Amory, Browne & Co. 44
Apco-Mossberg Corp. —
Arabol Mfg. Co. —
Armstrong Cork Co. —
Arnold, Hoffman & Co. 50
Ashworth Bros. 36
Associated Business Papers, Inc. —
Atlanta Brush Co. 16
—B—
Bahnson Co. —
Bancroft, Jos. & Sons Co. —
Barber-Colman Co. 43
Barber Mfg. Co. —
Bell, Geo. C. 28
Bond, Chas. Co. 17
Borne, Scrymser Co. —
Bosson & Lane —
Bouligny, R. H., Inc. 29
Bradley, A. J. Mfg. Co. —
Briggs-Schaffner Co. —
Brown, David Co. 30
Butterworth, H. W. & Sons Co. —
—C—
Carrier Engineering Corp. 46
Catlin & Co. 45
Charlotte Leather Belting Co. —
Charlotte Mfg. Co. —
Celanese Corp. of America 5
Chemical & Dye Corp. —
Cocker Machine & Foundry Co. —
Collins Bros. Machine Co. —
Adam Cook's Sons —
Corn Products Refining Co. 37
Courtney, Dana S. Co. 27
Crompton & Knowles Loom Works —
Crump, F. M. & Co. 39
Curran & Barry 44
Curtis & Marble Machine Co. 30
Cutler-Hammer Mfg. Co. —
—D—
D. & M. Co. —
Dary Ring Traveler Co. —
Deering, Milliken & Co., Inc. 44
Diamond Chain & Mfg. Co. —
Dixon Lubricating Saddle Co. 45
Draper, E. S. 28
Draper Corp. 1
Dronsfield Bros. —
Duke Power Co. 6
Dunning & Boschert Press Co., Inc. 29
Duplan Silk Corp. —
DuPont de Nemours, E. I. & Co. 9-41
—E—
Eastwood, Benjamin Co. 52
Eaton, Paul B. 42
Eclipse Textile Devices, Inc. 10
Economy Baler Co. —
Emmons Loom Harness Co. 16
Entwistle, T. C. Co. —
—F—
Fafnir Bearing Co. —
Fairbanks-Morse & Co. —
Fales & Jenks Machine Co. —
Farish Co. 28
Ferguson Gear Co. —
Ford, J. B. Co. 42
Foster Machine Co. —
Franklin Process Co. Insert
—G—
Garland Mfg. Co. 39
General Dyestuff Corp. 15
General Electric Co. —
Georgia Webbing & Tape Co. 36
Graton & Knight Co. 2
Great Northern Hotel 29
Greenville Belting Co. 29
—H—
Haberland Mfg. Co. —
Harris, A. W. Oil Co. 35
Hart Products Corp. —
H & B American Machine Co. 18
Howard Bros. Mfg. Co. —
Hunt, Rodney Machine Co. —
Hyatt Roller Bearing Co. Insert
Hotel Imperial —
—I—
Iselin-Jefferson Co. 28
—J—
Jacobs, E. H. Mfg. Co. —
Johnson, Chas. B. —
—K—
Kaumagraph Co. 13
Keever Starch Co. 24
Klipstein A. & Co. —
—L—
Lambeth Rope Corp. 42
Lane, W. T. & Bros. 51
Langley, W. H. & Co. 44
Lawrence, A. C. Leather Co. —
Lea, David M. & Co., Inc. 46
Leslie, Evans & Co. 44
Lestershire Spool & Mfg. Co. —
Lewis, John D. 27
Lincoln Electric Co. —
Link-Belt Co. —
Lowell Shuttle Co. 30
—M—
Marston, Jno. P. Co. 35
Mathieson Alkali Works —
Mauney Steel Co —
Meister, C. A. Co. 40
Moreland Sizing Co. —
Morse Chain Co. 51
—N—
National Aniline & Chemical Co. 33
National Ring Traveler Co. 45
Neutrasol Chemical Corp. —
Newmann, R. & Co. —
Newport Chemical Works, Inc. —
N. Y. & N. J. Lubricant Co. —
—O—
Oakite Products, Inc. —
—P—
Page Fence & Wire Products Assn. 40
Parker, Walter L. Co. 38
Parks-Cramer Co. —
Perkins, B. F. & Son, Inc. Insert
Philadelphia Drying Machinery Co. 29
Piccadilly Hotel 42
Polk, R. L. & Co. 46
—R—
Ramsey Chain Co. Insert
Reeves Bros., Inc. 44
Rhyne, Moore & Thies —
Roessler & Hasslacher Chemical Co. —
R. I. Warp Stop Equipment Co. —
Rice Dobby Chain Co. 40
Robinson, Wm. & Son Co. —
Rogers Fibre Co. —
Roy, B. S. & Son —
—S—
Saco-Lowell Shops —
Sandoz Chemical Works, Inc. —
Sargent's, C. G. Sons Corp. —
Scott, Henry L. & Co. 42
Seaboard Ry. —
Seydel Chemical Co. —
Seydel-Woolley Co. 50
Sipp Machine Co. —
Sirrine, J. E. & Co. —
S K F Industries 4
Slip-Not Belting Co. 45
Sonneborn, L. Sons —
Southern Textile Exposition 11
Sonoco Products —
Southern Landscape Service 47
Southern Ry. 43-46-47
Southern Spindle & Flyer Co. 38
Stafford Co. 52
Standard Nut & Bolt Co. 42
Standard Oil Co. —
Steel Heddle Mfg. Co. 25
Stein, Hall & Co. —
Stevens, J. P. & Co., Inc. 44
Stone, Chas. H. —
Sullivan Hardware Co. 46
—T—
Tagliabue, C. J. Mfg. Co. 23
Takamine Laboratories, Inc. —
Terrell Machine Co. —
Textile Finishing Machinery Co. —
Textile Mill Supply Co. 51
The Texas Co. —
Timken Roller Bearing Co. —
Tolhurst Machine Works 37
Tripod Paint Co. —
Tubize Artificial Silk Co. —
—U—
U S Bobbin & Shuttle Co. Insert
U. S. Ring Traveler Co. 46
Universal Winding Co. Insert-46
—V—
Veeder-Root, Inc. 12
Victor Ring Traveler Co. 45
Fred'k Vietor & Achelis 28
Viscose Company —
Vogel, Joseph A. Co. 41
—W—
Washburn, Inc. —
Watts, Ridley & Co. —
Wellington, Sears & Co. 44
Whitin Machine Works 3
Whitinsville Spinning Ring Co. 40
Williams, J. H. Co. —
Wolf, Jacques & Co. 19
Wood, T. B. Sons Co. 34
Woodward, Baldwin & Co. —

She Fixed It.

A clergyman and his wife were receiving a call from a parishioner. The clergyman's small daughter, aged eight, walked up to the visitor and, gazing intently at her, said, "Oh, my! But aren't you plain!"

Her mother, of course, was horrified and sought to undo the mischief as well as she could.

Frightened, Laura stammered: "I only m-m-meant it for a joke."

Which would have been as fortunate an escape as could be hoped for, but the mother pushed disastrously onward: "Well, it would have been a much better joke if you had said, 'How pretty you are!'"

What You Will See At the Exposition

(Continued from Page 17)

the complete line of well known products for which this concern is so well regarded. This year features will be emphasized and samples embodying many new ideas and improvements will make up a good portion of the exhibit.

The latest types of rayon and automatic quills will be shown, together with a variety of silk spools and fibre head spools, warp filling wind bobbins and the very popular "E" eye automatic shuttle.

Stanley C. Bouchard, Atlanta, Ga., Mat. Ousley, Greenville, S. C., Dillard C. Ragan, High Point, N. C., Southern representatives, together with D. R. Crawford from the Providence office, will be on duty to welcome old friends and new ones.

U. S. Gutta Percha Paint Company, Providence, R. I., will have space No. 112. On display will be a miniature cottage which will be painted with Outside Barreled Sunlight which has been on the market since October 1927 and which is very largely in use in many of the Southern textile villages today.

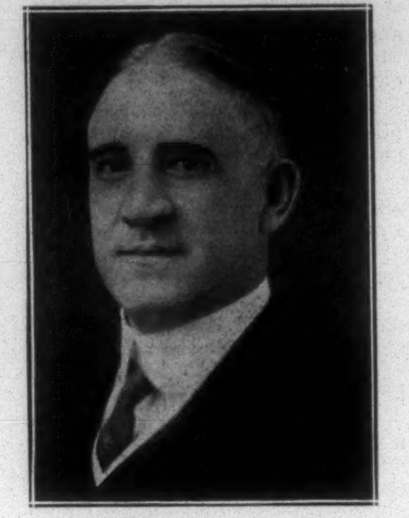
Their exhibit of Interior Barreled Sunlight will consist largely of panels painted with the product in white and the different tints along with the usual display of literature which includes reprints of their advertising which has featured nationally known users of their product.

Those in charge of the exhibit will be Alexander S. West, John S. Palmer, L. K. Palmer.

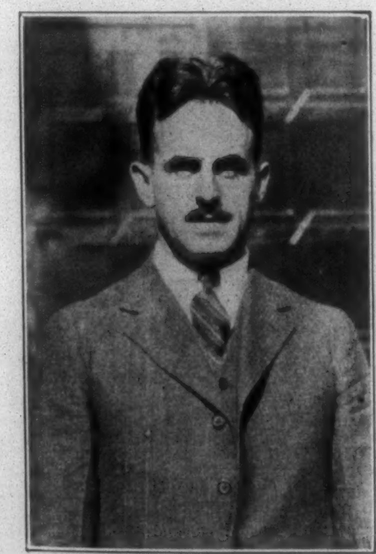
The Viscose Company, New York, N. Y., are planning to incorporate in their exhibit an educational set up explaining the fundamental principles of the making of rayon yarn, and on a rather elaborate scale will display all types of merchandise in which rayon is used, giving as much as possible the latest style tone.

They will have on hand a full range of artistic and appealing rayon fabrics, where rayon is used alone or in combination with silk, cotton and wool. They hope it to be a far more beautiful and comprehensive exhibit than they have heretofore given at the Exposition.

Wm. P. Dutemple
Whitinsville Spinning Ring Co.



W. H. Porcher
Whitin Machine Works



H. M. Rose
The Viscose Co.

John A. Robinson
Timken Roller Bearing Co.

Six definite reasons why you should use

Gum Tragasol

1. A pure vegetable gum.
2. Uniformity unquestionable.
3. Adds strength to yarn.
4. Reduces shedding.
5. Reduces seconds caused by loom stoppages.
6. Better Production. Better Cloth.

John P. Marston Company
Importers
247 Atlantic Avenue, Boston

HARRIS
TRADE MARK—REG. U.S. PAT. OFF.
OILS
AND
GREASES

WE have done business in the South for the past

40 YEARS

DURING that time, HARRIS OILS have won a reputation for uniform high quality.

IF you want LUBRICATION ECONOMY, write us today and let us tell you why it is ECONOMY to use HARRIS OILS in your plnat.

A. W. HARRIS OIL CO.
326 South Water St.
Providence, R. I.

Principles of Predetermining Cotton Manufacturing Costs

(Continued from Page 7)

goods manufactured a careful estimate of the exhaustion of plant resulting from the production of the goods. As this factor of cost must be determined while the equipment is still in active use, it is necessary to adopt the best estimate that can be made of the probable exhaustion.

"It is now well recognized that depreciation constitutes part of the cost of operating a manufacturing industry. Any industry which ignores it or fails to make adequate provision for it, misleads itself as to the result of its operations. The Federal Government recognizes the soundness of including depreciation in the cost of manufacture, and accountants are in agreement to the same effect. If a mill does not include these items, it fails to keep itself informed as to the costs its sales must cover in order for it to be permanently successful, and if it habitually sells at prices insufficient to cover depreciation it is destined to failure.

"Yet it is a well-known fact that many mills exclude depreciation in their costs, except in prosperous years. But a mill should face squarely just what its costs are in unprosperous years as well as in prosperous years, and of course depreciation takes place as much—(and perhaps more)—in unprosperous years.

"The determination of proper percentages for depreciation requires a study of the individual mill, its hours of operation and its working conditions, and must be arrived at in the light of the policy of the management as to repairs and maintenance.

"If a mill should operate at greater than single shift capacity, depreciation on machinery and equipment should be increased. This is the most modern practice and is recognized by the Federal Government."

Interest on investment, according to the outline, should be included in the computations of costs at a rate of 6 per cent or any higher rate indicated by the current cost of money. As defined in the report, investment includes investment in plant after deducting depreciation; inventories of raw materials, stock in process and finished goods; and other working capital. Investments in stocks and bonds are not included.

On this subject the outline says:

"There is some diversity of view as to the propriety of including interest on investment, although the modern tendency is unquestionably toward its inclusion as a cost item in arriving at a minimum cost at which sales can be made and the business continue to enjoy reasonable prosperity. For that purpose certainly a moderate compensation on the capital employed must be taken into consideration as a part of the cost predetermined as an aid to a sales policy. If a mill ignores this item and predetermines its cost in disregard of it, then the mill may sell its goods for prices sufficient to cover all other elements of cost, and still be unsuccessful and unsound as a commercial proposition because it has ignored any allowance for compensation for the capital employed.

"The showing of the item of interest on investment is, therefore, important in order to keep the mill constantly on its guard as to the success of its operations.

"It may well be that the item of interest on investment should be kept separate from the other items, but it is nevertheless necessary for the mill to make a distribution of the interest on investment to the respective productive departmetns so that both yarn and cloth may bear their due proportions of this burden. The entry and distribution of interest on investment in the predetermination of costs for sales purposes will be, of course, confined to the working sheets employed in computing such cost and will not be carried in the mill's books of account. But this makes it none the less proper to give due weight to interest on investment in predetermining cost as a guide to sales policy."

In the interest of uniformity the Institute recommends that total labor "include all wages paid, and such is construed to include all items on the payroll from overseers on down."

"The total amount for labor (direct labor and indirect labor), which should be included in the budget to be used in building up the labor part of the predetermined costs, should be, of course, a wage allowance schedule which conforms with the normal production already decided upon."

The outline recommends that supplies be not treated as capital expenditures.

"Not only supplies and repairs which are commonly known as mill supplies, machinery parts, etc., but also the so-called large supplies and repairs, such as spools, bobbins, reeds and harness, card clothing, painting mill villages, etc., should generally be treated as maintenance expenditures and not as capital expenditures, because ordinarily they do not add materially to the value of the property or increase its productive capacity or apprecibaly prolong its life, but merely keep the plant in proper and efficient operating condition. This is believed to be the general practice of the mills. The occasional practice of some mills to treat some of these items as capital expenditures is an unsound practice, understating costs and overstating investment without correspondingly increasing the mill's ability to pay a return on the investment.

"Starch and size should be treated as a supply rather than a material expense; i. e., it should not be treated as a part of or incident to the cost of cotton and waste except in cases where the goods are to be weighted.

"Fuel consumed should be considered to mean the net amount after coal sold has been credited.

"Rents should be credited to village expense and the net difference in these items should be debited or credited to cost.

"Taxes should be included in costs including income taxes payable to the Federal or State Governments.

"Loss on account of irregular goods, seconds, shorts, etc., should be included in the total costs.

"Idle machinery—machinery which is required for normal production should be treated, even when temporarily idle, as a factor in arriving at predetermined costs, but all machinery permanently idle should be excluded. An illustration of idle machinery which should be taken as a factor in predetermined costs is the following: A mill may be balanced on one or more products, but frequently some other product, within its range, will bring a premium in the current market. The result may be that the mill will change over to the product which yields the greater return. If such change-over is made and if it thereby causes idle spindles or idle looms, the overhead incurred on this idle machinery should be charged to the new product.

"Selling expense. Trade discounts, freight allowed on outgoing products, and selling commissions should be included in the total costs, rather than as a deduction from the gross selling price. This will insure against these items being overlooked (as they frequently are) in comparing costs with prices and will facilitate the promptest and most accurate comparison between costs and prices.

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Texas Mill Supply Co., Inc., Texas Representative, Dallas, Texas

"After the predetermined budget has been completed, each item on it should be distributed to the operating departments on a proper basis and then the costs of the individual yarn numbers and the different fabrics should be figured. Whenever appreciable changes occur in the price of supplies, coal, etc., or in the cost of labor or overhead items, corrections in the budget reflecting these changes should be made promptly and the costs should be refigured to allow for these variations. Also, if the factors from which normal production has been deduced should change to such an extent as to call for the adoption of a new figure for normal production, the computations respecting costs should again be made so as to reflect this modification.

"The object of predetermining costs is to afford the management a guide as to sales policy. Since what the management sells is specific fabrics or yarns, each at its own price, it is essential to assign the various costs as to reflect accurately the cost of each fabric or yarn, and in due relationship to the costs of other fabrics or yarns. Unless this is done, the management is in the dark as to the profitableness or unprofitableness of different products."

The outline is not intended to be a detailed cost manual, but is confined in developing what are regarded by the Institute and its advisors as proper basic principles.

Textolite Picker Production Increased

Branding a report that it has stopped manufacturing textolite pickers as untrue and declaring that the circulation of the rumor by a salesman of rawhide pickers to be one of the worst cases of unfair trade practices it has encountered in years the General Electric Co. announced that it plans to double its investment in textolite pickers.

"We have been in continuous production on these textolite pickers since February and at no time have we stopped manufacturing them or had any reason to give consideration to such a step," declare H. R. Randall, manager of the textolite division of the company in a letter to W. Irving Bullard, treasurer of the National Association of Cotton Manufacturers.

"As you know," Mr. Randall continues, "our investment in this business is already an important sum and one which we are preparing to increase to a total more than double that we have already spent.

"It is possible that our having dropped the use of advertising space since early in the year may have given rise to this rumor. You know we did this simply because we were not able to increase our manufacturing facilities rapidly enough to take care of the trade and therefore, it seemed inadvisable to attempt to stimulate further business by advertising. Now, however, that our manufacturing facilities are entirely adequate for the silk and cotton trades it may be desirable to again use space in the textile trade papers if only to offset a damaging rumor of this kind."

The textolite picker, which is made of army duck and synthetic rosin was invented several months ago and has been regarded as one of the most important developments of its kind in recent years. It is being sold and is giving satisfaction to cotton and silk manufacturers in this country and abroad, according to Mr. Bullard. The later announced that a textolite picker for woolen and worsted looms has been perfected and will be put on the market this month. Some months ago the E. H. Jacobs Manufacturing Company, of which Mr. Bullard is treasurer, was given exclusive sales representation by the General Electric Company and all its associated companies throughout the world for textile loom and spinning machinery parts made from textolite.

July Cotton Consumption in Richmond Area Shows Drop

Richmond, Va.—Cotton mills in the Fifth district consumed only 187,601 bales of cotton in July this year, compared with 222,235 bales used in June, and 239,653 bales consumed in July a year ago, according to the monthly report of the Federal Reserve Bank of Richmond. Due to a custom of closing the mills about a week around July 4, a lower consumption for that month than in June is seasonal, the report points out, but this year the decline between June and July was more marked than in most years because the mills closed ten days. Orders not being sufficient to take the output of the mills, some stock had accumulated in the warehouses, and the mills adopted the shutdown to allow shipments to catch up with production.

The report goes on to say: "The situation in the textile field continues highly unsatisfactory, with little sign of immediate improvement. The mills are running on restricted schedules, but orders are insufficient to take even their limited output. The official crop estimate did not help the situation. The mills have operated on a falling cotton market since the beginning of July, which made buyers still more reluctant to place forward orders."

Committee D-13 To Meet Oct. 10-11

Members of Committee D-13 will hold their fall meeting Wednesday and Thursday, October 10 and 11, at the U. S. Chamber of Commerce Building, in Washington, D. C. Business sessions will be held during the mornings of both days and the afternoon of the first day and a dinner at the Hay-Adams Hotel on Wednesday evening.

Inspection trips to the Textile Section, U. S. Bureau of Standards; Cotton and Waste Wool Grading Division; Bureau of Agricultural Economics; Research Laboratory and School, and to the headquarters of the aNtional Association of Dyers and Cleaners will be held on Thursday afternoon. Buses will be provided to take the members to the various places.

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W. H. MONTY
Pres. and Treas.

P. S. MONTY
Vice-Pres.

New Plant of American Glanzstoff Corporation

(Continued from Page 8)

Mr. Oppenlander is the engineer in charge of the entire project for the owners, and it has been largely through his hard work and careful attention that the rapid and successful completion of the project has been accomplished.

The preparation of detail drawings for construction, placing of contracts for the construction and equipment of buildings, and for machinery purchased in this country, has been carried out by Lockwood, Greene engineers, Inc., under the direction of Mr. Oppenlander. The field work has been carried out under the direction of W. G. Norteman, resident engineer for Lockwood-Greene engineers, Inc.

Principal Contractors.

The contractors on the principal parts of the work were as follows:

Excavation—B. G. Young, Johnson City, Tenn., and Dempster Construction Co., Knoxville, Tenn.

General Construction — Hughes-Foulkrod Co., Philadelphia, Pa.

Structural Steel — McClintic-Marshall Co., Pittsburgh, Pa.

Roof Lumber—Long Leaf Yellow Pine Manufacturers' Association, New Orleans, La.

Fire Protection—Holyoke Valve & Hydrant Co., Holyoke, Mass.

Power House and Process Piping—Grinnell Co., Charlotte, N. C.

Chimney—Alphons Custodis Chimney Construction Co., New York City.

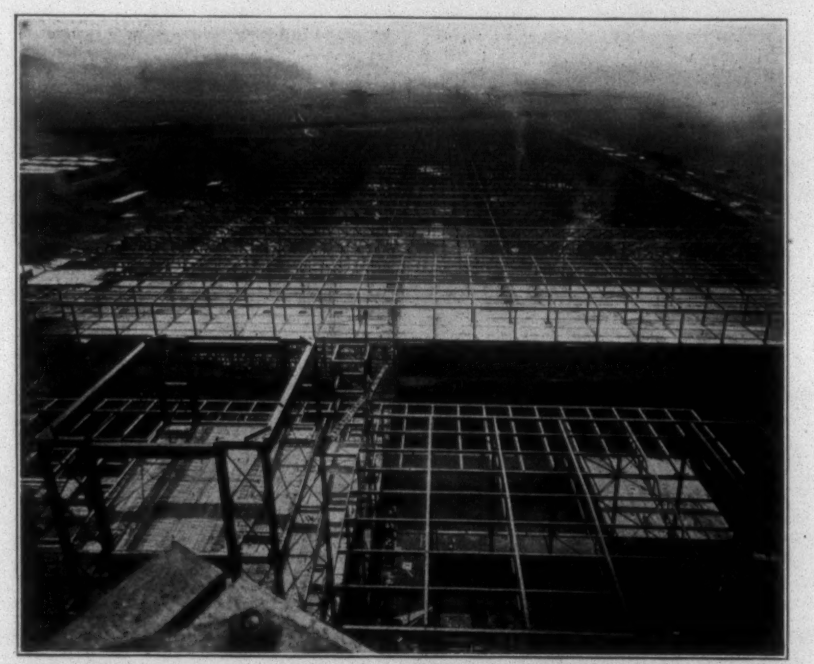
Turbine — Westinghouse Electric and Manufacturing Co., New York City.

Boilers—The Babcock & Wilcox Co., New York City.

Stokers — Westinghouse Electric and Manufacturing Co., New York City.

Coal Handling — Guarantee Construction Co., New York City.

Electric Wiring—Walker Electric and Plumbing Co., Atlanta, Ga.



Steel Work Completed for Principal Group of Buildings, February 1.

Three 825 H. P. Stirling Boilers in Place in Power House, April 16.

Refrigerating Equipment — DeLaVergne Machine Co., New York City.

Transformers and Motors — General Electric Co., New York City.

Air Conditioning — Carrier Engineering Corp., Newark, N. J.

Machine Shop Equipment — Summers Hardware Co., Johnson City, Tenn.

Filter Plant Equipment — Roberts Filter Manufacturing Co., Darby, Tenn.

Problems in Dyeing Rayon

(Continued from Page 25)

are knit in the gore at the heel and toe. By this means, the heel and toe will not tend to fold over as much when wet, and consequently dye more uniformly.

Dyeing Three Fiber Combinations.

In dyeing three-fiber combinations of rayon, silk, and mercerized cotton, the same care must be shown in choosing the direct dyestuffs with high capillary numbers as formerly; however, those dyestuffs are usually accepted which not only give good unions on the mercerized cotton and rayon, but also color the silk. The silk will usually be lighter and often of a different shade than the rayon and mercerized cotton. If the numbers being produced are silk plaited, this can readily be observed, but when silk and rayon twisted numbers are produced, more difficulty is encountered, as a heathered effect will result. In order to bring the silk up to shade, the neutral dyeing colors are used, and usually those which are cotton and rayon white.

The dyeing procedure is the same as for the all-rayon numbers.

When cross dyeing is resorted to, in order to bring out patterns, not by reversible plaiting the silk and rayon, the direct dyes selected are those which are silk white. The silk in turn is dyed in the same bath with those neutral dyeing acid colors which are cotton and rayon white. By this means the patterns can be brought out in any color contrast desired.

Dyeing Underwear Tubing.

In dyeing underwear tubing, the problems which present themselves to the dyer are of an entirely different nature than in hosiery dyeing. Underwear tubing instead of being knit from one cone or bobbin is usually knit from eight to twelve ends. These ends all are parallel and recur at periodic courses. If for any reason one end dyes a different shade than the remainder, a periodic stripe or barre will result. Barre may be produced by a variation in tension during knitting, by a variation in stitch, by a variation in the oil content which in turn varies the take-off tension, by the actual variation in denier or filament count or harshness of the yarn or by the variation in the dye index of the different ends. Whatever is the cause for barre in underwear tubing, it is certainly no fault of the dyer, but it is the duty of the dyer to minimize the barre to as great an extent as possible. Underwear tubing may be made salable or be unsuitable, depending on the dyer. More care must be exercised here than in hosiery dyeing where only one end is used, that when formulating shades only dyestuffs which dye on at the same rate are used. If this rule is not strictly adhered to, the barre will not only be a darker or lighter shade, but will also be an entirely different shade, which will naturally accentuate the defect. The first requisite, then, is to carefully select the dyestuffs, using those with the highest capillary numbers, and taking care that these numbers are all of approximately the same magnitude in each formula.

The conditions of application which minimize barre are—first, applying the dyestuff at as high a temperature as possible, and, second, eliminating, or at least minimizing, the amount of salt used.

It is recommended to start dyeing at 180 degrees F. if possible. This temperature, however, will depend on local conditions, such as type of machine, speed of reel, length of piece, etc. The higher the temperature, the less noticeable will be the barre.

Rayon Skein Dyeing.

The problem in connection with rayon skein dyeing is that of different shades in the same skein or variation from skein to skein. Exactly the same precautions are taken here, as in the dyeing of underwear tubing. The dyer is urged to select the dyestuffs very carefully and to dye the skeins at as high a temperature as possible with the minimum amount of salt. Of course, the temperature of dyeing rayon skeins must be adjusted so that poor winding will not result. If skein dyeing machines are used, it is possible to use higher temperatures than when hand dyeing is employed.

In the dyeing of piece goods, variations may occur as "warp streaks" or "filling mars." Here again, the same precautions are taken to minimize these defects, as selection of dyestuffs, starting temperature of dye bath, and the minimum of salt.—Rayon Journal.

Greenville Plain Goods Mill To Close for Week

Greenville, S. C. — Plain goods mills of Greenville will curtail this week for the third time this summer having been idle the first week of July and August also. The local plants shut down Saturday at noon and will not resume operations until September 10.

Mills which will curtail this week, it was indicated are Monaghan, Woodside, Brandon, Mills Mill, Poinsett, and Poe. The American Spinning Co., a coarse goods mill, will not shut down. The plant is now behind its orders, it was said. Fancy goods mills, bleacheries, dye plants, plush mills, and the like, will continue to operate full time. This list includes Union Bleachery, Southern Bleachery, Southern Worsted Mill, Judson, Dunean, Southern Weaving Mills, Piedmont Plush Mill, and a few smaller plants.

Patient.

Farmer—"Why did it take you so long to put the bridle on that horse?"

Farmhand (from city)—"I had to wait until he yawned, to get the bit in his mouth."

SUPERINTENDENTS AND OVERSEERS

We wish to obtain a complete list of the superintendents and overseers of every cotton mill in the South. Please fill in the enclosed blank and send it to us.

...., 192.......

Name of Mill..

Town...

.....................................Spinning Spindle ....Looms

....Superintendent

....Carder

....Spinner

....Weaver

....Cloth Room

....Dyer

....Master Mechanic

Recent changes...

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MEMPHIS, TENN.

GARLAND
LOOM PICKERS and
LOOM HARNESSES
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High Drafting on Ring Spinning Frames

(Continued from Page 12)

particularly applicable in the case of new mills.

On this question of the reduction in the number of fly frames and consequent less floor space, the following illustration can be given. A ring spinning mill on the Continent was equipped with 80,000 ring spindles and 70 fly frames working on the ordinary low draft system. After experimenting, the plant was changed over to high drafting and a further 60,000 ring spindles were installed, making 140,000 in all. For all the extra production obtained from the spindle point, the existing 70 fly frames were able to supply all the roving required by producing coarser hank roving.

Early Methods and Experiences.

The author is expressing a personal opinion in saying, that when Casablancas, the probable pioneer in high drafting, commenced his experiments with the use of "rubber bands" as a drafting medium, he had, in all probability, no idea in his mind about "high" drafting. (Incidentally, it may be mentioned in passing, that rubber bands were used in the first instance in the Casablancas system, but as the rubber perished so quickly owing to oxidation, it was necessary to utilize a commodity more durable and leather bands were used instead). It is possible that Casablancas, in his first experiments, was attempting merely to secure more perfect drafting by using a new means to control the fibres more effectively and more gently. The idea of securing a high draft with his new apparatus came possibly as an inspiration or as the result of observation.

Progress Abroad.

It is an unpleasant statement to make, but it is a fact, that spinners and investigators abroad have shown more enterprise and courage in exploiting the high draft system than English spinners have manifested. As a proof of the enterprise of the Continental spinners in the matter, it can be said quite truly that there are millions of spindles working on the Continent of Europe on high draft systems which have been designed abroad—systems that have scarcely been tried in this country. This is quite apart from the Casablancas system which is a Spanish invention, on which system many millions of spindles are also already working.

It would probably be a matter of great surprise to all interested in the cotton trade at home, if they were to be informed of the great number of ring spinning machines, all fitted with various types of high draft mechanism, that have been delivered to the Continent, from England, during the last three or four years. While this expansion of high drafting has been going on abroad, spinners at home have to a great extent pursued a "wait and see" policy. While hesitating at home, our competitors have been reaping the rewards of courage and enterprise.

The Attitude at Home.

English employers proposed to hold a conference for the purpose of investigating the pros and cons of high drafting as recently as the early part of last year. Surely this was a very belated investigation, considering that so many foreign competitors had already proved for themselves, a few years ago, the value of the system and had already reaped the resulting advantages. It is encouraging, however, to be able to state here, with regard to spinners at home, that during the last two years there has been a marked increase in inquiries and orders for spinning machines fitted with high draft arrangements. In fact, interest at home in the system is at the present time greater than ever before. This increased courage of spinners at home, manifested in a more general adoption of the system, coupled to the increasing confidence of machinists in advising it, should lead to collaboration which can only result in popularizing the system and in extending its adoption at home and abroad.

High Drafting Compared With Ordinary Drafting.

It is now desirable to proceed to the consideration of the term "drafting" and what the process involves. Drafting, as applied to cotton spinning, as already stated, means attenuating or lengthening out the sliver or roving of cotton fibres, in order to reduce the same to a thinner size at each process. Drafting is, up to the present, the only known means of achieving this attenuation. The process, unfortunately, has shortcomings which limit its degree of success. It is admitted that drafting, in any process, does not tend to improve or even preserve the evenness of the roving under treatment. It is a well known and generally admitted fact that the greatest regularity in wrapping is found at the finishing head of the drawing frame. This tendency towards irregularity after leaving the drawing frame, is due to the inherent defects in the drafting, coupled to the slight stretching of the roving which takes place in the winding process at the various stages in the fly frames. It therefore follows that any new method of drafting in the ring frames, which permits of a reduction in the number of processes, will assist in minimizing this evil tendency towards irregularity, and should therefore be regarded as a means leading to a great improvement.

The "Control" of the Fibres.

The defects in ordinary drafting are largely due to the fact that so large a percentage of the shorter fibres are left "floating" and uncontrolled during the actual drafting process. This lack of control of the short fibres is due to the compulsory wide settings from the nip of the front rollers to the nip of the middle rollers. High drafting seeks to give, and renders possible, a more effective and reliable control of the shorter fibres, by reducing to a minimum the number of fibres which are "floating" or uncontrolled, at the point where the actual drafting takes place. The particular system of high drafting which does this most effectively, without introducing other evils, is most likely to show the best result in the spun yarn.

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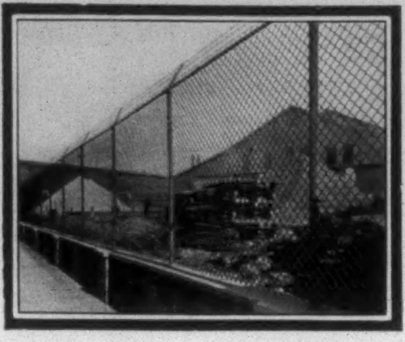
the
floor space



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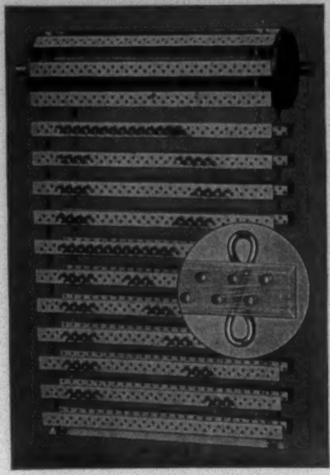

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Colored and Fancy Cotton Yarns

Drafting, by means of a series of mechanical operations (followed by a simple spinning process), converts a homogeneous mass of cotton fibres, lying together in all conceivable directions and positions, into a fine thread of a required thickness and weight, possessing surprising regularity and of wonderful strength. Further than this, the individual fibres composing this thread are found lying in beautiful parallel formation, which is the secret of its strength. This marvelous result is achieved notwithstanding the fact that the natural characteristics of the fibres themselves are such as to be more or less opposed to the treatment involved. Every individual fibre is a delicate flattened cell, more or less spiral in form, tortuous to a greater or lesser degree in its length, and in appearance resembling a piece of barbed wire in miniature. On account of these peculiar natural features, it is reasonable to assume that every individual fibre will offer some opposition to being straightened out and laid in the neat parallel order which is essential to produce the thread of yarn desired. High drafting systems are designed to control the intractable fibres more efficiently than is possible in ordinary low drafting systems and, by so doing, conduce to a better result.

In June, 1921, at the World's Cotton Conference, a paper on "Characteristics of cotton required by the spinners and present defects in the raw materials," stated that "the process of drafting is interfered with if the fibres are of unequal length." This is admitted to be a true statement of fact and the logical inference from it is, that, if all the individual fibres were of equal length the results from drafting would be much more satisfactory and a higher quality of yarn would be produced.

An Interesting Comparison.

A useful digression may now be made in order to consider the comber for a few moments. For what reason and purpose was the comber introduced into the sequence of operations in the card room? Simply because, as previously stated, "that drafting is interfered with if the fibres are not of equal length." The comber was therefore designed and used for the extraction of all fibres below a predetermined length, in order to leave the remaining bulk approximating more to one general length, with the sole view of securing more perfect drafting in the succeeding stages. Now by taking a broad-minded view, the comber can be regarded as a controller of short fibres, of a specific type. Its method of control, by extraction, is a very costly one and can only be economically employed when super quality yarns are required. For ordinary yarns the loss, of say 15 per cent to 20 per cent, of the bulk of fibre, such as takes place in the comber, is, for economic reasons, not permissible. It was necessary, therefore, to find some other means of improving the drafting in a more economical manner, and the special setting of the drafting organs in high drafting systems provides a means of controlling the short fibres, far in advance of any such control found in the ordinary drafting arrangements. The two methods of control are of course vastly different in principle but the result aimed at is the same in both, namely, more perfect drafting and eventually, an improved yarn.

Length of Fibres and Settings of Rollers.

When considering the hindrance to a good standard of drafting caused by the variation in the length of the fibres, if American cotton with a nominal staple of 1⅛-inch is examined it is found that as much as 50 per cent of the total will probably measure not more than from ¾-inch to ⅞-inch, while a further proportion will be still shorter. Variation in the length of the fibres, almost to a similar degree is also found in Egyptian and other long stapled cottons. In badly ginned cotton or cotton of immature growth, the short fibres comprise even a higher proportion still. It will readily be understood that ordinary drafting, which must have the settings of the drafting organs slightly wider than the nominal length of staple, leaves a very high percentage of the total fibres in a "floating" condition and uncontrolled. High drafting arrangements permit of a much closer setting of the drafting members, and it is this element that reduces so considerably the percentage of the "floating" fibres. It is, in this feature, that high drafting systems secure a distinct advantage over the ordinary system.

Long and Short Fibres.

In American cotton it is calculated that ordinary drafting arrangements frequently leave 80 to 85 per cent of the fibres uncontrolled, whereas the close setting, possible in most high drafting systems, reduces this percentage to about 50 per cent or 55 per cent. In Egyptian cotton on ordinary drafting, uncontrolled fibres may represent about 70 per cent of the total, but on a well-designed high draft system this figure is reduced to something like 25 per cent or 30 per cent. When these facts are digested and it is realized what this increased control during the process of drafting means, it is surely not a difficult matter to decide which system is the more likely to give the better result.

In ordinary or low drafting it is necessary, before setting the drafting rollers, to ascertain the length of the staple. This determines the setting of the rollers which, on account of the weight of the middle top rollers, must be set slightly wider than the staple length, to prevent breaking of the fibres. In this system all the fibres are more or less uncontrolled, with the exception of those fibres which happen to be over the average length. The shorter ones, as already stated, are entirely free to float in any direction during the period of drafting. It is the releasing from control of these short fibres which interferes with a reliable and satisfactory result in draftnig on this system. Fortunately, one of the characteristics of cotton fibres is, that they possess a natural affinity for each other and this affinity is the great factor

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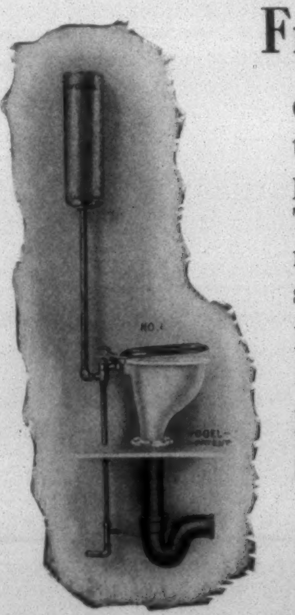

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which materially assists in keeping them within reasonable bounds, and so helps to secure the moderate results that are obtained from ordinary low drafting. However, this, in a large measure, can only be called frictional draft as it is not really due to any effective control or guidance by the drafting mechanism.

To be concluded)

A New Regulating Rheostat

Neater appearance, lower price and simplicity of installing are the features of a new direct current regulating rheostat announced by the Cutler-Hammer Manufacturing Company, Milwaukee, Wis. This new rheostat can be used to control the speed of fractional horsepower motors driving small blowers, fans, buffers, book-keeping machines and similar apparatus; it can be used as as a dimmer on lighting circuits, or it can be used as an electric heater regulator. The device is of the circular plate type, completely enclosed. It is small in size to permit mounting directly on machines or in any out-of-the-way place. The standard rheostat is furnished for conduit wiring but if open wiring is to be used a porcelain bushing is quickly added.

The mechanism consists essentially of a cement imbedded resistance unit, with brass contact buttons protruding through the cement, and a contact arm which moves over the buttons varying the resistance. A small, neat-appearing enclosing case with an outside operating lever protects the unit and prevents accidental contact with live parts.

New Fiber Plant for Textile Yarns

A newly discovered fiber plant grown in large quantities in Asia has been found to be of use in producing textile yarn. The new fiber is known as kendyr and experiments carried on show that a mixture of 50 per cent kendyr and 50 per cent cotton produces a good quality cloth. A machine built for its manufacture has a capacity of two tons a day, the output being 600 to 900 pounds of fiber and 350 to 500 pounds of tow.

Kendyr is grown in only three sections of central Asia on an area estimated at approximately 300,000 acres.

We Salute Joe Fowler

(From The Columbia Record)

At Glendale, S. C., lives a philsopher. His name is Joe J. Fowler. He is a mill worker, and for 46 years, excepting ten years that he lived on the farm, he has lived at the mill. During those years he has apparently observed and meditated to some purpose, and from his meditations he has evolved a point of view with regard to lawyers, politicians and preachers that is somewhat nuusual and refreshing.

In a letter to The Spartanburg Herald, recently, Joe Fowler unburdened himself of some of his thoughts and they are so sound that we are glad of the chance to pass them along to our readers by reprinting his letter:

"Will you give space for a few lines in your paper? Over at Cowpens some of the lower house candidates put out a sweet bait, etc. Want cotton mills to give 30 days notice and pay part time when stopped. Let the mills alone. We have so many laws we are brudened already. We need at least 50 or 100 laws done away with. The mills feed many people give work to farmers, buys farm products, gives us poor people some cash to spend in your city, and I sure will not vote for any man who wants to strike a death blow to our manufacturing industry. Well do I remember a statement from a great man, John C. Calhoun, the least law is best to govern a nation. I know it is true. Why not a law also to pay railroad shopmen laid off. No, only our mills needs the whip with a scorpion. We 'factory crackers' once swallow bait, hook and line. But we will have the line to give some smart alex at home this time. For 46 years I have lived at the mill, less about 10 years on farm, and I hope the mills will run and prosper. If some of our lawyers and politicians and preachers were on the farm plowing a mule or ox our country would be better off. There are not white collar jobs for so many. There must be hewers of wood and drawers of water.

Joe Fowler is obviously no Ph. D. He is patently no master of political economy with a college degree to his name, but he has written a creditable thesis on the subject. We are heartily in sympathy with his conclusion that "if some of our lawyers and politicians and preachers were on the farm plowing a mule or ox our country would be better off." He is in company with some of the best minds of all ages when he says we have too many laws And one way not to have so many laws would be to put some of the oliticians, lawyers and preachers on the farm.

The Record takes its hat off to Joe Fowler. May his tribe increase.

Diamond Chain Expands Plant

The Diamond Chain and Manufacturing Company of Indianapolis has completed plans and placed contracts for a large additional factory unit four stories high that will add 40,000 square feet of floor space to their plant. Reinforced concrete fireproof construction similar to the present plant will be employed. The additional capacity has been made necessary because of the greater use of Diamond roller chain on machinery ,and more particularly the high speed power drive applications. The multiple strand type has been increasingly employed for power drives in hundreds of industries wherever power is to be transmitted, regardless of speed. The production of Diamond timing drive chain for motor cars has increased to the point where additional manufacturing space is required for this department also.

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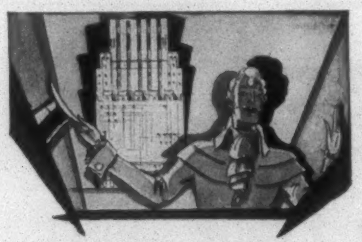

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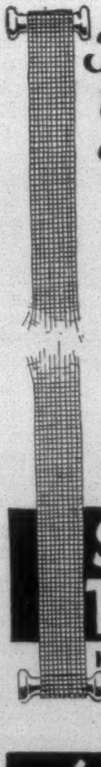

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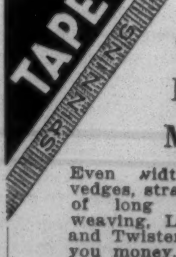

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Even widths, perfect selvedges, straight edges, made of long staple; uniform weaving, Lambeth Spinning and Twister Tapes can save you money. Ask for prices and samples.

Lambeth Rope Corporation,
Charlotte, N. C.

Urges Cotton Manufacturers and Growers to Cooperate

(Continued from Page 10)

and the sum of their individual strength determined.

When a yarn breaks only about 10 per cent of the fibers are fractured; the rest slip by. Spinning quality may, therefore, be rated as spirality, length and fineness of diameter of the fiber. In a cross section of a 40/1 yarn made from 1⅛-inch American cotton there are about 129 to 135 individual fibers, while in a 40/1 yarn made from extra staple Egyptian Sakellarides cotton they number about 150 to 160.

Urges One Type for Each County.

Cotton is a highly variable raw material. Each county should have its own types determined by selection of seed that would suit the fertility of the soil, the usual care in cultivation and general climatic conditions. Cotton is very sensitive to cross fertilization by insects, so it is consequently almost useless for a man to attempt to grow finer types of cotton than his neighbors are planting because through cross fertilization the types will soon merge.

If America is going to maintain her place as the cotton growing country of the world, her salvation lies here in Texas, where through proper research you can grow the best cotton in the world. You have the soil and climatic conditions and only need the vision and some one to say "Let's go to it."

Shall the South continue to dump her cotton crop on the market in as short a period as possible, which is contrary to all laws of sound business and most suicidal to the cotton farmer, or will you get together for orderly marketing, thereby helping yourselves as well as the manufacturer of your cotton by establishing a price that will not vary during the season from 10 to 15 cents per pound.

Lauds Work of Marketing Groups.

There has been organized in every cotton growing State in the South a "Farmers' Co-operative Marketing Association," which proposes to market the crop of their respective States in an orderly manner and thereby help to secure for the farmer cost, plus a reasonable profit to which they are justly entitled.

These organizations have made exceptional progress within the short period they have been in operation, and while some of these organizations are the largest single factor in the market today in holding the price of cotton, they could become more efficient and better organizations if more farmers would deliver their cotton to be marketed by them and the bankers and merchants joined hands in helping them and seeing that they are well and properly managed. They have done lots of good work for the cotton grower already.

There is great interdependence between the grower and the manufacturer that must not be overlooked. Greater attention must be paid by all manufacturers in the future to the quality of the fiber they use. The raw material is a fundamental factor in operation. No mill can attain the best results unless it gives due and proper consideration to the kind and character of fibers it spins. A great many mills today are using cotton not best adapted to economical results from the view of efficiency in production of the cloth they are making, yet the raw material averages 50 per cent of the price of all cloth made.

Farmers Need Organizations Most.

One of the most essential things that the cotton growers need today is to get all interested groups on the raw cotton side of the industry thoroughly organized, so as to get the necessary co-operation between groups to solve the problem of quality production, which then would be more simplified. On the other hand, it must be admitted that there are trade associations on the raw cotton side of the industry so highly organized as to take care of all problems, such as giving the grower all information on the market value of his cotton, transportation, warehousing, insurance, legal aid, and to provide many other similar services entirely beyond the ability of the average business man.

The organization of a one-variety community for the production of better quality cotton must be followed by a second step leading to the development of a plan of marketing which is inexpensive and at the same time rewards each producer according to the commercial value of his product. The marketing must not be left to chance. A definite program should be adopted by each community. Such a process of careful planning and detailed marketing research must inevitably make progress. An adequate system of publicity must be developed to stimulate interest in the project and at the same time make available for the use of all the soundest program known.

Urges Reducing Wastes and Middlemen.

Cotton is not a perishable material, and, if kept in a proper warehouse where it can retain its normal 8 per cent moisture, will improve. The storing of cotton bales exposed to all weather conditions results in a loss each year to either grower or manufacturer of at least $1 per bale for hard edges. The uncalled-for drawing of an average per bale of five or six samples is a loss of about $1 per bale, and, together with the loss in natural moisture through improper warehousing at an average of $1 per bale on the 7,000,000 bales used in our country, we have a loss through waste of $25,000,000 per season.

Then, by cutting out the many middlemen through which cotton has to pass, and having only the grower, merchant and manufacturer, a saving of about $10,000,000 would be made. No doubt, there would be a loud cry from the ones who have been making money without real service to either grower, merchant or manufacturer, if we did this.

America has never failed in any great thing she has undertaken, so let the best brains of the men familiar with this great fiber, which is the most essential in the world, get together for the benefit of all.

Let us go forth together and our slogan be "Field to Fabric."

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Cotton Goods

New York.—A fair volume of business in cotton goods was done during the week. Somewhat firmer prices were noted on some constructions of print cloths and sheetings. Production continued on a restricted basis. Large buying was held back until the next cotton crop report, due September 8th. About 80 per cent of the mills making print cloths and sheetings were expected to close this week. Fine goods production is not over 50 per cent, due to the strike at New Bedford and the demand for fine goods has gradually improved.

Sales of tire fabrics running through the end of the year were reported. Good business in wide cloths for the automobile and other manufacturing industries continued during the week. Denims and prices suffered when prices bid for a large government contract were a half cent to 2½ cents under current market quotations.

The demand for colored goods was better, sales of chambrays, low end ginghams and other lines being larger. A moderate business in cotton blankets and flannels for fall was reported. A larger business on 4-4 bleached goods at low prices was noted.

A fair business in print cloths and in sheetings was placed in the coarse yarn cloth market in a number of constructions. Firmer prices prevailed in some sections, the 64x60s print cloths firming first hand to 7½c, at which level they were sold in small quantities. Among the active numbers were 80 squares, which were generally quoted firm through the market at 10½c, and were reported to have sold in fair volume at tat level. Another report said that fair sales on contract at 10⅜c were made during the week.

Interest in sheetings, according to the majority of reports, remained limited. There were sales of 31-inch, 48x48, 5.00 yard at 6⅝ cents net; some 36-inch, 40x40, 6.15 yard sold at 5⅝ cents net, and the 44x40 count sold at three-quarters. Second hands soid some 36-inch, 48x40, 5.50 at 6 cents net; sales of 40-inch, 48x44, 3.75 yard at 8⅞ net; sales of 40-inch, 56x56, 4.00 yard at 8⅞ cents net.

The 68x72s were also a point of interest in the print cloth section, and sold at 8⅝c contract for October and November deliveries. September and spot goods were held for 8¾c, with spots scarce, except in a very few quarters. Some second hands asked higher prices spot. On 60x8s sales continued to be made at 6½c and on 6x56s at 7¼c. The 64x60s sold second hand at 7⅜c, but a few small first hand sales were made at the new price of 7½c. Sales of 43-inch 56x48s were made at 7½c. In narrow goods 32-inch 64x60s were sold at 6½c.

Some shading of prices on clean-out lots of quick goods and in some instances of distress merchandise, occurred in the fine cloth market, but prices generally held firm and moderate sales in a variety of goods continued to be made. Readjustments preliminary to the fall trade continued to be made in some quarters, notably in shirtings and brassiere cloths, where some compromise were being effected between style tendencies and the exigencies of trading to the end on the one hand that a carryover of unsold goods and resulting distress prices might not be repeated next season, and on the other that goods might be kept within the price range to which the trade has become accustomed.

Fair business was reported in the 100x60 carded, at 10½ cents; some centers reported being cleaned up to October at that price. The recent trading in 80x60s has cleaned up spots of feeler-motion goods in most centers; non-feelers were being quoted at 8⅝ cents; October reported best delivery at moment on the 56-pick, at 8½ cents. Spots of 90x60 quoted at 9⅞ to 10 and contract 10 cents higher. Fair sales of good makes of 128x68 combed at 17 cents, spot and contract; good makes of 144x76 singles sold at 18½ cents.

Cotton goods prices were as follows:

Print cloths, 28-in., 64x60s	6⅛
Print cloths, 27-in., 64x60s	5⅞
Gray g'ds. 38½-in., 64x60s	7⅝
Gray goods, 39-in., 68x72s	8½
Gray goods, 39-in., 80x80s	10¾
Dress ginghams	12½a15
Brown sheetings, 3-yd	11¾
Brown sh't'gs, 4-yd. 56x60s	9¾
Brown sheetings, stand	12¾
Tickings, 8-oz.	22 a23½
Denims	19
Staple ginghams, 27-in	10½
Standard prints	9

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The Yarn Market

Philadelphia, Pa.—Spinners found yarn trading difficult during the week and there was little change in the dull conditions that have prevailed for many weeks. Inquiry was good, but the resultant business small. A fair volume of orders in small lots was reported, but larger business for forward shipment was slow. The price situation appeared almost deadlocked over the spread between buyers and spinners ideas of price. Bids from consumers continued to be very low and dealers in this market found that they could get little response when submitting the offers to spinners. A good deal of irregularity was noted in prices, in some instances prices showing a difference of several cents a pound. Spinners found it hard to figure out prices on the basis of what cotton would cost them if the yarn orders were handled promptly and covered immediately with cotton. Actual cotton prices continued higher than future quotations, spinners complaining that good cotton was scarce.

The knitting trades continued to show more interest in yarns than the other divisions, little inquiry being noted from the weavers. There is a growing feeling that larger business should develop by the middle of September. Buyers have been postponing their orders as far as possible and as a rule have taken only what yarns they need for immediate use. The amount of buying has been much under the normal for the season and the potential demand is regarded as strong. In addition, stocks are low, which should make for a much better business as soon as a better demand develops. The next cotton crop report, due September 8 has caused further delay among buyers and little buying is expected this week. With the report out, however, many spinners are optimistic that the cotton situation will be considerably cleared and consumers more willing to operate.

Southern Single Skeins

4s-8s	33
10s	33½
14s	34½
16s	34
20s	36
24s	38
26s	40
40s	43½

Southern Two-ply Skeins

4s-8s	33½
10s	34
12s	34½
16s	35½
20s	37
24s	37½
26s	38½
30s	40½
40s	49
50s	58½

Southern Single Warps

4s-8s	33½
10s	34
12s	34½
14s	35
16s	35½
20s	36½
30s	40½
40s	49½

Southern Two-ply Warps

8s	33
10s	34
12s	34½
14s	35
16s	35½
20s	36½
24s	38
26s	38½
30s	40½

Southern Frame Spun Carded Yarn on Cones

8s	32½
10s	33½
14s	34
16s	34½
18s	34
20s	35
22s	36
24s	37
26s	38
30s	39½
40s	47½

Southern Two-ply Combed Peeler

8s	44
20s	48
30s	[illegible]
38s	55
40s	56
50s	62
60s	66
70s	76
80s	87

Carpet and Upholstery Yarns in Skeins

8s to 9s 3-4-ply tinged tubes	30½
8s 3-ply hard white warp twist	30½
10s and 10s 3 and 4-ply hard white yarn tubes and skeins	31½
Same, warps	32½

Southern Two-ply Hard Twist Combed Peeler Weaving Yarns

8-12s,	46
20s	48
30s	53
36s	54
38s	56
40s	57
50s	60
60s	65
70s	80
80s	85

Southern Combed Peeler Single Yarn on Cones

10s	42
12s	42½
16s	43½
22s	46
24s	47½
26s	48½
28s	49½
38s	52½
40s	54½
50s	60
60s	65
70s	75

Trading in the Fall River print cloth market for the week found a wealth of small orders with the result the volume of business put through has been fair, approximately 25,000 pieces. It was apparent from demeanor of buyers that immediate goods were necessary. Buyers are aparently waiting for the next Government cotton report and until that time nothing extraordinary is anticipated in the line of buying. Then again, mills are also interested in this report and an adverse report may find prices stiffening.

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Final limit good to return on all regular trains (except Crescent Limited) so as to reach original starting point prior to midnight for Atlanta, Monday, September 10th; for Birmingham and Chattanooga, Wednesday, September 12, 1928.

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Patent No. 1,636,992.

EMPLOYMENT BUREAU

The fee for joining our employment bureau for three months is $2.00 which will also cover the cost of carrying a small advertisement for two weeks.

If the applicant is a subscriber to the Southern Textile Bulletin and his subscription is paid up to the date of his joining the employment bureau the above fee is only $1.00.

During the three month's membership we send the applicant notices of all vacancies in the position which he desires and carry small advertisements for two weeks.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau connected with the Southern Textile Industry.

WANT position as overseer carding. Experienced, and well qualified. Best of references. No. 5488.

WANT position as manager, general superintendent or superintendent. Understand all processes of manufacturing from raw cotton to finished goods. Best references—all past employers. No. 5490.

WANT position as overseer spinning. Understand the Bedeaux system, low cost and good production. References. No. 5491.

WANT position as overseer spinning. Experienced, well qualified and will go anywhere. No. 5492.

WANT position as overseer carding or spinning. 23 years mills experience and can give good satisfaction. No. 5493.

WANT position as overseer cloth room. 17 years on present job. Present employers will recommend me. No. 5494.

WANT position as overseer spinning, spooling, twisting, winding; 8 years experience, age 41; good manager of help; can figure any change in spinning room; will take day or night work. References. No. 5495.

WANT position as overseer carding. Long experience and best of references. No. 5496.

WANT position as overseer weaving, plain or drill. Now taking course in fancies. Age 41. Eight years experience as second hand and overseer. Married, two other workers in family. Member Baptist church. Best references. No. 5497.

WANT position as overseer cloth room. Nineteen years experience on plain, colored and fancies. Good references. No. 5498.

WANT position as roll coverer and belt man. 13 years experience; age 38; married; best of references. Can handle any size job. No. 5499.

WANT position as superintendent, or as carder and spinner; plain or fancy, Jacquard and Dobby weaves of all kinds. No. 5500.

WANT position as overseer spinning; would take position as second hand in large mill; also overhaul machinery. Age 34. Martel Mills officials will recommend me. No. 5501.

WANT position as dyer, bleacher, chemist, on cotton goods. 21 years experience on ginghams, awning and ticking; can dye sulpher, vat, mineral and vegetable. Age 42. Best of references. No. 5502.

WANT position as overseer weaving, carding or spinning; well experienced and best of references. No. 5503.

WANT position as superintendent or assistant to superintendent, or carding and spinning. Qualified, experienced, reliable. No. 5504.

WANT position as overseer spinning. 20 years experience; will be at liberty after August 25th. No. 5505.
overseer large department, — either

WANT position as superintendent or as carding, spinning, weaving or cloth room. Would accept position of traveling salesman of mill supplies. No. 5506.

WANT position as overseer or second hand in spinning; age 34; I. C. S. graduate; will go anywhere. No. 5507.

WANT position as overseer weaving or designer, or as stenographer and cost accountant. Experienced dobby designer, and fancy weaver; well educated and want position where there is a chance of advancement. No. 5508.

WANT position as overseer weaving or as second hand in large mill. Age 37. One year on fancy weaves, six years overseer cloth room. I. C. S. graduate. Will go anywhere. No. 5509.

WANT position as overseer carder or spinner or both in smaller mill. I. C. S. graduate; experienced; married and no bad habits. Am a North Carolina boy. No. 5510.

WANT position as overseer carding or spinning, or spooling, twisting, warping and beaming. Prefer carding and spinning, and would like to go to Okla. or Ark. No. 5511.

WANT position as superintendent of a yarn mill; eight years on present position as superintendent. Good record and best references. No. 5512.

WANT position as superintendent, or as overseer carding, spinning or weaving in large mill. Most of experience on plain sheeting. Age 36. On present job 10 years. Married but no children. No. 5513.

WANT position as overseer plain or fancy weaving. Would consider position as second hand in weaving in large mill. 20 years experience on dobby weaves and silk. Age 50. Two in family work in mill. No. 5514.

WANT position as general office assistant. Young woman, age 26, graduate Limestone College and of Draughn Business College. Two years in mill office as shipping clerk and assistant book-keeper. Understand all office and clerical work. No. 5515.

WANT position as master mechanic and electrician. Experienced, practical and efficient. Best of references. No. 5516.

WANT position as master mechanic or engineer in cotton mill. More than ten years experience in some of the largest shops in the South. Haxe building experience and understand large turbines. No. 5517.

WANT position as napper and cloth room overseer. Age 37; 18 years experience on sheetings, drills, denims, osnaburgs and canton flannels. Experienced napper and finisher. No. 5518.

WANT position as overseer cloth room. Familiar with all kinds white goods. Now employed but for good reasons wish to change. Best references. No. 5519.

WANT position as superintendent or as overseer carding or spinning in large mill, or both in medium sized mill. Ten years on present job. Best references. No. 5520.

WANT position as overseer fancy weaving. Experienced on C. & K. and Stafford automatic looms. Good hand to start up new or reconstruct old machinery. Well educated and good references. No. 5521.

WANT position as superintendent. Familiar with fancies and colored work, but prefer large yarn mill for a change. No. 5522.

WANT position as overseer cloth room. Experienced and well qualified. Best of references. No. 5523.

WANT position as assistant superintendent or as overseer carding or spinning or both. Familiar with white and colored work. Age 36. Best of references. No. 5524.

WANT position as superintendent or as overseer weaving; experienced on all kinds of white and fancy goods. Now employed but want larger job. No. 5525.

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Always Specified

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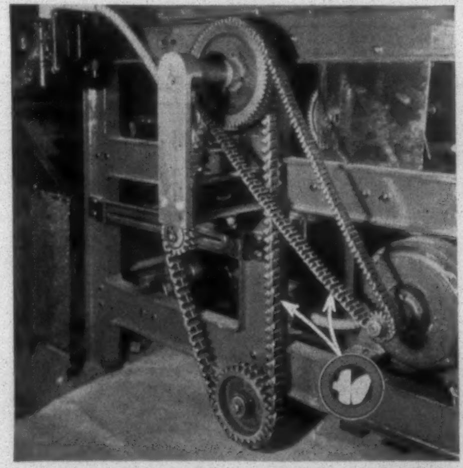

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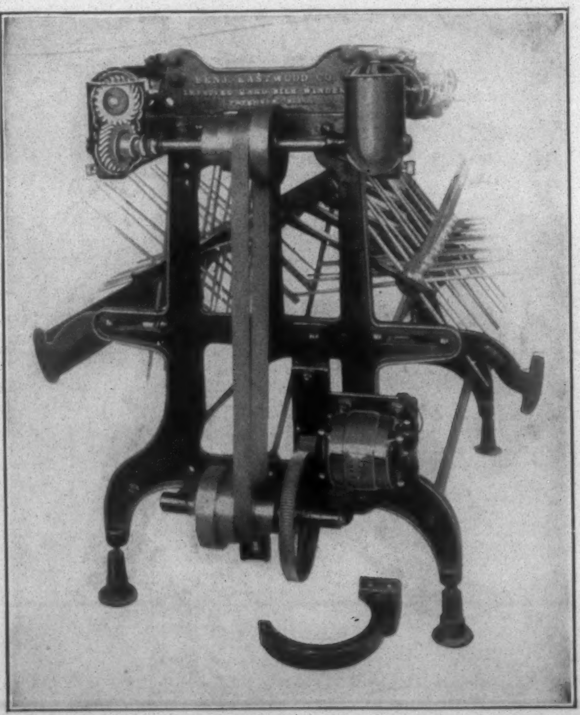
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